A study to assess the knowledge of premenstrual syndrome and its management among adolescent girls at selected colleges in Bangalore urban with a view to develop an information booklet.

by

Silvy Thomas

Dissertation submitted to

Rajiv Gandhi university of Health Sciences

Bangalore, Karnataka.

In partial fulfillment of the degree of

Master of Science in Nursing

in

Community Health Nursing

Under the guidance of

Prof. Mercy P. J.

Head of the Department of Community health Nursing

St. John's College of Nursing

St. John's National Academy of Health Sciences

Bangalore-34

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Rajiv Gandhi university of Health Sciences, Bangalore, Karnataka.

DECLARATION BY THE CANDIDATE

I hereby declare that this dissertation entitled "**A study to assess the knowledge of premenstrual syndrome and its management among adolescent girls at selected colleges in Bangalore urban with a view to develop an information booklet**", is a bonafide and genuine research work carried out by me, under the guidance of **Prof. Mercy P. J, Head of the Department of Community Health Nursing**. St John's College of Nursing and **Dr. Sulekha T, Associate Prof. Department of Community Medicine,** St John's Medical College Hospital, Bangalore.

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Date: 22/01/2011

Signature of the candidate

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LIST OF ABBREVIATIONS USED

PMS	: Premenstrual Syndrome
PMT	: Premenstrual Tension
PMDD	: Premenstrual Dysphoric Disorder
DSM	: Diagnostic & Statistical Manual of Mental disorders
DHS	: Directorate of Health Services
HESP	: History, Economics, Sociology& political science
PCMB	: Physics, Chemistry, Mathematics & Biology
PU	: Pre- University
SD	: Standard Deviation
%	: Percentage
Sl. No.	: Serial Number

ABSTRACT

Background

Premenstrual Syndrome is the name given to the set of physical, psychological and emotional symptoms that appear in the days leading up to a women's monthly period. It is also known as Premenstrual Tension. Usually, the symptoms improve when the women's period starts, and disappear a few days afterwards. Nearly all women of child bearing age have some premenstrual symptoms; those between their late 20s and early 40s are most likely to experience PMS. A small number of these women will have symptoms severe enough that they can disrupt their daily lives. PMS can be tackled through education and to impart knowledge we must know the knowledge level of the adolescent girls regarding PMS and its management. Some studies have been conducted among Women of reproductive age to assess the knowledge on PMS, but no studies have been conducted to assess the knowledge of the younger generation. Youth are more influencing to spread the knowledge through peer group involvement and due to their inquisitiveness to learn new things. Thus the investigator had taken up the study to assess the knowledge of Pre University adolescent girls regarding Premenstrual Syndrome and its management and to develop an information booklet on the meaning, causes, Signs & Symptom and Management of PMS.

Objectives

1. To assess the knowledge of adolescent girls regarding the PMS and its management.

2. To find the association between knowledge and selected baseline variables (age, age at menarche, year of education, Stream of education, prior information about PMS, Source of information about PMS).

3. To develop an information booklet for adolescent girls regarding the PMS and its management.

Methods

The research design adopted for the study is a descriptive design which was considered appropriate for the study. Stratified random sampling was used to select the samples from science and arts students of selected pre-university colleges of Bangalore urban. The data was collected through a structured questionnaire and the sample size was 300.

Results

The result of the study showed that 262 (87.3%) of the adolescent girls had inadequate knowledge (≤50%), 38 (12.7%) of the adolescent girls had moderate knowledge (51-74%) and none possessed adequate knowledge regarding the various characteristics of PMS. Data revealed that there was an association between the knowledge and prior information about PMS $\chi 2=26.712$, $p<0.001$ and source of information about PMS $\chi 2=6.576, p=0.037$, but there was no association between the knowledge score and other baseline variables like age, year of education, stream of education and age at menarche.

Interpretation and Conclusion

It was evident from the present study that Pre University adolescent girls had inadequate knowledge on PMS and its management. India is looking for the young adults to build the nation into a developed country in terms of knowledge, money and infrastructure. Hence it is the responsibility of the health personnel to make the youth aware of various health factors which can hinder the growth of the country and motivate them to impart the knowledge gained to the peer group and general public.

Keywords: Premenstrual Syndrome, Pre University Adolescent Girls, Knowledge

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INTRODUCTION

1. Introduction

Background of the study

Menarche is the onset of menstruation and it is one of the most significant milestone's in a woman's life. Menses by design is a special "women's" time.[1] It is time of whole body cleansing and being in synchronization with cycles larger than the individual-the moon cycle of 28 days of waxing and waning. It is a time of renewing creative cycles-physically, emotionally, mentally, and spiritually.[2]

Adolescence is a phase of storm and stress and is the most vulnerable group to suffer health problem if they lack knowledge about reproductive health and related problem.[3] In India, the adolescent population constitutes more than one fifth of the total population. It is estimated that there are almost two hundred million adolescents in India between that age group of 10 to 19 years. It is expected that these age group will continue to grow reaching over 214 million by 2020. According to 1992 – 1993 DHS data on adolescents in India, especially girls, in urban constitutes of 26% and girls in rural consists of 74% between the age group of 10-14 years.[4]

Premenstrual Syndrome has plagued women since the dawn of time, but has only recently been recognized as a serious disorder. While it is often dismissed by practitioners. It is a cause of enormous and needless suffering by as many as 50% of menstruating women. Many women experience PMS every month. Although the intensity of symptoms can vary from month to month depending on diet, stress levels or other factors.[5]

In the 'Sickness of Virgins' Hippocrates described a variety of symptoms ranging from delusions, mania and suicidal ideation to "retained menstrual blood".

Beliefs about the relationship of the menstrual cycle to behaviour are also described in the Talmud and the Holy Bible.[6] The term 'Premenstrual Tension' was first coined by R.T Frank in 1931 and 'Premenstrual Syndrome' by Greene and Dalton in 1953. However, in 1847, Dr Ernst F. von Feuchtersleben wrote: "The menses in sensitive women is almost always attended by mental uneasiness, irritability and sadness". American Psychiatric Association (APA) 1994, equates most severe end of PMS spectrum as PMDD (Premenstrual Dysphoric Disorder).[7]

PMS is reported in women in many cultures worldwide. About 80% of women in their reproductive years experience some emotional and physical symptoms before their periods that impair daily activities.[8] A cautious estimate of the prevalence of severe symptoms would be 2% to 8%. Women from various countries have reported PMS symptoms, although the types and frequency have differed[9].

Pre menstrual Syndrome encompasses a variety of emotional and physical symptoms which occur from several days to several weeks before the onset of menstruation and subside with the menstrual flow.[10] When women first started reporting these symptoms, they were often told it was 'all in their head'. Interest in PMS began to increase after it was used as a criminal defence in Britain during the early 1980's.[11]

Over 150 symptoms involving almost every organ system have been attributed to PMS. The most common being generalized head ache, breast swelling and tenderness, bloating, fatigue depression and irritability. Although it is interesting to note that not all of them are negative symptoms. Stewart found that 60% of his samples reported that at least one positive symptom such as increased libido, more energy, more creative ideas and a tendency to get things done.[6]

PMS has been reported in all reproductive age groups but women in their 30's are most likely to seek treatment. Wilson & Key studied a group of 88 adolescent and found that 76 of them (88%) reported Premenstrual Syndrome.[6] Studies of PMS estimate that from 20% to 90% of women experience some premenstrual changes, severe symptoms which can significantly interfere with a women's functioning in social and work situations occur in 3 – 15 %. PMS has been associated with serious dysfunctions including marital discord, divorce, and alcoholism and child abuse. [6]

If PMS is diagnosed, the first approach should be conservative. Education and supportive therapy can be of major benefit.[9] The management of PMS may include simple measure such as exercise, dietary changes, and vitamin supplementation. Pharmacologic agents such a progesterone, prostaglandin inhibitors, diuretics, oral contraceptives, or psychotropic drugs may be useful in selected clients. Support and counselling is of paramount importance in management of PMS. Nurse-midwives can manage women who have minor and transient physiologic and emotional changes associated with mild degrees of PMS. Women with moderate and severe symptoms should be referred for evaluation and follow up.[6]

Need for the study

Menarche and menstruation are important aspects of a woman's life. The early menstrual cycles of adolescent girls may be anovular, irregular but are not devoid of problems for them. Adolescent girls experience premenstrual symptoms seven to ten days before the onset of bleeding. These include irritability, malaise, headache, acne, abdominal pain etc. The menstruation in majority of Women is asymptomatic apart from vaginal bleeding, However some may have pain in abdomen with or without gastrointestinal upsets like anorexia and vomiting. The medical and social

consequences of premenstrual symptoms and disorders of menstruation influence not only the individual but also her family and society[12].

Adolescence comes from the Latin word 'adoloscere' which means 'to come to maturity'. It is a period of dramatic growth and development. A process of transition from childhood to adulthood. Physical distinction between the sexes become apparent during puberty, but sexual maturity in girls however generally associated with menarche, the onset of menstruation[13].

Premenstrual syndrome is a major clinical entity affecting a large segment of Women population. It is the name given to a group of physical and emotional symptoms that some women experience on regular basis in relation to menstruation. The symptoms occur generally within seven to fourteen days prior to menstruation. Symptoms may seem to worsen as menstruation approaches and subside at the onset or after several days of menstruation[14].

The first report on the prevalence was in 1997 by Ruble. It was described to occur in 15-100% of women of reproductive age with 5-10% reporting severe symptomatology at some point in their lives with impaired social interrelationships and disrupted lives. Later studies and reviews in many countries also reported similar findings. PMS is related to high suicide and accident rates, employment and social absentee rates, poor academic performance and acute psychiatric problems[15]. Estimates of the prevalence of premenstrual syndrome among United States menstruating women, aged 18 years or older, range from about 60 to 95%. 10 to 15% of women experiencing severe or disabling symptoms[16].

While some experts claim that virtually all menstruating women experience PMS. PMS is a collection of symptom more than 200, but the three prominent symptoms are irritability, tension and dysphoria (unhappiness). Exact symptoms and their intensity vary from woman to woman. The number of women who experience PMS depends entirely on stringency of the definition of PMS, while 80% of menstruating women experienced at least one symptom that could be attributed to PMS, estimates of prevalence ranges from as low as 3% to as high as 30%[6].

A study undertaken by the National Institute of Mental Health and Neurosciences (NIMHANS), India demonstrated that among the 100 non complaining women using the Premenstrual assessment form I & II. More than 10 specific premenstrual symptoms on Premenstrual assessment for II were reported by 29, though only six women reported that the feelings were intolerable. The findings indicate that premenstrual experiences are generally mild and bearable in Indian women[17].

PMS is no longer a taboo in western countries, where a lot of publicity, self help books and specialized clinics highlights the importance of premenstrual syndrome to general public and help women to overcome this temporary problem[18].

During college studies, the investigator came across students being absent predominantly during menstruation and also felt that heightened mood swings and other negative symptoms which affects the academic and personal life among students which could also be attributed to PMS. At the time of professional life too investigator felt that PMS have an impact on workplace, which leads to reduction in work efficiency.

Adolescence itself is a period of growth and development and requires special attention to maintain and promote health and wellbeing. In India there is no specific adolescent development programme. Their healthcare needs are served through school health services. Here the community health nurse plays a vital role. She has a major responsibility towards health promotion and development[19].

A study shows that medical students have more knowledge about PMS than other students. So it is expected that PMS in these group of students is less than in those students who don't have enough knowledge about PMS[20].

As per the study done in Ethiopia among University students, aged between 17-38, the report shows that PMS was highest among natural science students. PMS also varied significantly among class years. First year students constitute the highest number of cases of PMS. The age group 17-19 years had the largest number of cases of PMS, followed by the group of 20-22 years. [3]

PMS has been studied and evaluated extensively in the West and only a handful amount of research studies have been conducted in Asia.[21] Today most of the research studies among adolescent girls have focused on nutritional problems, anaemia, obesity, menstrual hygiene and menstruation. Very little information is available on Premenstrual Syndrome.

Severe PMS symptoms have negative impact on academic and social performances of the students. Investigator felt that giving knowledge about PMS will help in coping with the negative impacts of PMS among the adolescent girls. Students are the promising group to country's development. Therefore the investigator felt a strong need to take up this study to assess the knowledge on PMS among adolescent girls.

Statement of the problem

A study to assess the knowledge of Premenstrual Syndrome and its management among adolescent girls at selected colleges in Bangalore Urban with a view to develop an information booklet.

OBJECTIVES

2. Objectives

Problem Statement

A study to assess the knowledge of Premenstrual syndrome and its management among adolescent girls at selected colleges in Bangalore urban with a view to develop an information booklet.

Objectives

1. To assess the knowledge of adolescent girls regarding PMS and its management.
2. To find the association between knowledge and selected baseline variables.
3. To develop an information booklet for adolescent girls regarding PMS and its management.

Operational Definitions

1. Knowledge:

In this study, it refers to adolescent girls' awareness regarding PMS and its management which is measured by their responses to the item on the structured questionnaire and scores.

2. Premenstrual syndrome:

In this study, it is defined as physical (abdominal cramps, fatigue, bloating, breast tenderness, acne and weight gain), behavioural (food cravings, poor concentration, social withdrawal, forgetfulness, decreased motivation) and psychological (depression, irritability, tension crying, over sensitivity and mood swings) symptoms

experienced during the week prior to menstruation and subsides within a few days of its onset, causing disruption to occupational, family and personal functioning.

3. Adolescent girls:

In this study adolescent girls would be aged between 15-19 years and who are doing their PU Course (PCMB – physics, chemistry, mathematics & biology) and (HESP – history, economics, sociology, political science) as their main subject, in selected Pre University colleges, Bangalore Urban.

4. Information booklet:

A book consists of printed material containing information related to PMS, the definition, diagnosis, cause, signs and symptoms and management.

5. Baseline Variable: In this study it refers to age, age at menarche, year of education, stream of Education, prior information about PMS, Source of information, about PMS.

6. Assumption

This study assume that

- Adolescent girls will have some knowledge about Premenstrual Syndrome.
- Premenstrual symptoms are common in adolescent girls.

7. Hypothesis

There will be a significant association between the knowledge and selected baseline variable (age, age at menarche, year of Education, stream of Education, prior

information about PMS, Source of information, about PMS) at 0.05 level of significance.

Conceptual Frame Work

A conceptual model is a group of concepts or ideas that are related. It provides a certain frame of reference for clinical practice, research and education. It gives direction to research for relevant questions on phenomena and point out the solutions to practical problems.

The conceptual framework of this study is based on Rosenstoch's, Becker's, Maiman's health belief model (1974). The model provides a way of understanding and predicting how people or an individual behave in reaction to their health and how they modify the risk factors and what preventive actions that they take to maintain health.

Rosenstoch's and Becker's health belief model described the following components.

* The individual perception
* Modifying factors
* Likelyhood of actions

1) Individual Perceptions

Perceived susceptibility means the feelings of an individual about disease.

Perceived seriousness is concerned about the consequences of disease, perceived threat which determines the threat of illness.

2) Modifying Factors

Factors that modify a person's perceptions which include the following.

Demographic variable, comprise of age, sex, race and ethnicity.

Socio psychological variables, which are concerned about social pressure, influence from peers or from other reference groups.

Structural Variables, which includes knowledge about the target disease and prior contact with it. These are presumed to influence preventive behaviour.

Cues to action, it includes internal cues and external cues.

Internal Cues - Feeling of fatigue

- Uncomfortable symptoms
- Thoughts about the conditions of an ill person who is close

External Cues - Mass media campaign

- Advice from others
- Illness of family member or friends
- News paper
- Magazine article

3) Likelihood of action

The third component likelihood of action depends on the perceived benefits of action minus the perceived barriers to the action.

Perceived benefits of the action: Individuals take specific preventive measures to prevent particular disease and to maintain health and well being.

Perceived barriers to action: Individuals take certain measures to reduce barriers like minimizing in convenience or discomfort.

Conceptual frame work of the present study assume that adolescent girls, basically will have some knowledge regarding PMS, which is influenced by their baseline variables like age, stream of education and also by the different source of information like newspapers, mass media, advice from others, actual observation of people suffering from Premenstrual Syndrome etc. Majority of adolescent girls may also suffer with few or more symptoms of PMS, which again affects their baseline variables and different sources of information.

The assessment and analysis of knowledge of Premenstrual Syndrome among adolescent girls by the investigator will lead to know the degree of knowledge of the adolescents' regard to PMS. If the adolescent girls have adequate knowledge, they will be able to manage PMS on their own. The girls with moderate knowledge may also be able to cope with PMS with assistance by health professionals. But if the women have inadequate knowledge, they definitely, will not be aware of coping strategies of PMS. Hence they suffer more with the same. Based on the knowledge deficit areas the investigator develops information booklet aiming the prevention and management of PMS. If this module is implemented, especially among adolescent girls who have moderate to inadequate knowledge, this will lead to the improvement of their knowledge and ability to prevent or to cope with PMS.

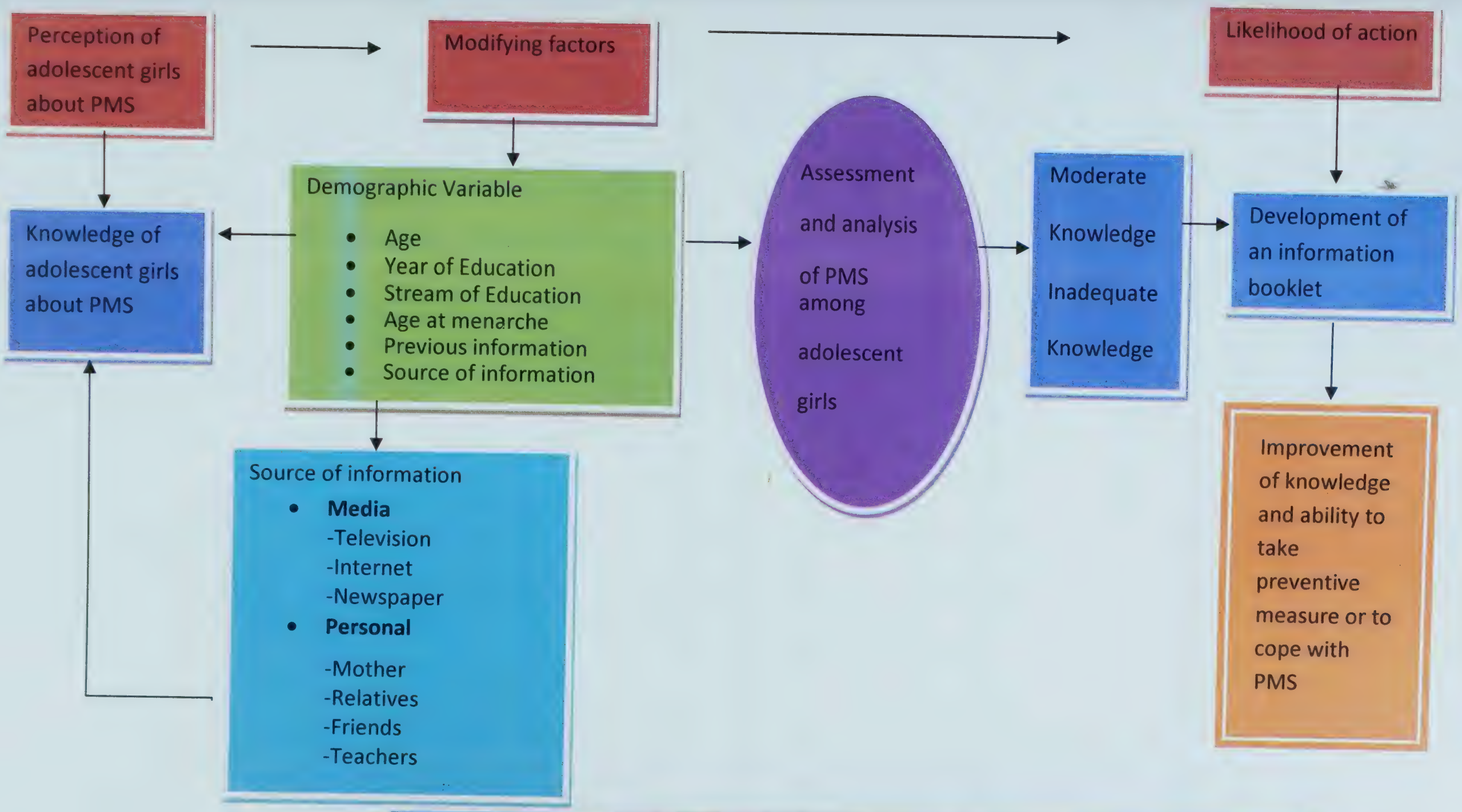

Figure 1 – Conceptual framework based on Rosenstoch's health belief model

Delimitation

* This study is restricted to adolescent girls between 15-19 years of selected urban colleges in Bangalore.

* This study is restricted to pre-university adolescent girls aged 15-19 years at selected urban colleges in Bangalore.

Projected Outcome

The study will help to reveal the existing knowledge on Premenstrual Syndrome among Pre- University adolescent girls. Being a community health nurse, the findings of the study will provide the baseline information to prepare educational materials and implement effective health education for students and other people in the community settings regarding various aspects of Premenstrual Syndrome. Peer group influence will help in sharing the knowledge among college students.

REVIEW OF LITERATURE

3. Review of Literature

Review of literature is a key step in research process. Review of literature provides a basis for further investigation, justifies the replications through logic on the feasibility of the study and constraints of data collection, and relates the findings from one study to another to establish a comprehensive body of scientific knowledge.

An attempt has been made by the researcher to review and discuss research literature related to the present study and the literature reviewed is organized and presented under following headings.

1. **Studies related to Knowledge about PMS**
2. **Prevalence, frequency of symptoms and remedial measures of PMS.**

1. Studies related to knowledge about Premenstrual Syndrome.

Gaining knowledge has been regarded as an important goal towards improving an individual's health status. It also helps to gain a means of controlling feelings and powerlessness. Conversely, a lack of knowledge can attribute to a variety of responses including anxiety and self care deficit.

As per a study done in Mexico to determine the influence of knowledge about PMS in the reports of women and their symptoms aged between 20-40 years. The experimental group watched a videotape describing PMS and its negative consequences in daily life. The control group watched a videotape describing the menstrual cycle. The Menstrual Distress Questionnaire was administered to all women during the first week after menstruation, after which they were shown their

designated videotape, and the questionnaire was administered. The result shows that there were no significant differences in premenstrual symptoms reported both before and after the women watched the videotape. However, women in the experimental group reported more severe premenstrual symptoms after watching the videotape[22].

As per a study conducted in USA, 35 item survey was administered to postmenarcheal adolescents ages 12-21years. 91.5% of the respondents were African-American. The conclusion of the study is PMS and dysmenorrhea are prevalent medical disorders among urban adolescents. Morbidities, including school absenteeism are higher among those with negative period expectations. Since only 2% of teens received information regarding menstruation from their health care provider, it is imperative that health care providers increase their anticipatory guidance regarding normal menstruation[23]

An education program was developed and evaluated to determine the efficacy in increasing knowledge and decreasing the severity of symptoms of PMS. Study was done among 94 school girls aged between 14-18years from four secondary schools in Hong Kong were assigned to either experimental or control group. Immediately following the education programme the school girls in the experimental group had significantly increased knowledge scores as measured by the PMS knowledge questionnaire. No significant differences were found for the control group on pre-test and post-test PMS scores suggesting that the education programme could have been the source of the reduction in PMS symptoms of the experimental group of young adolescent girls[24].

A study conducted to examine college women's (mean age 19-21 years) expectations, attitudes and knowledge about menstrual related changes in order to

provide a more complete picture of how women perceive the experience of menstruation and to explore the interrelationship of this variable. Subjects were recruited by advertisement. For data collection, structured questionnaire was used. In general the result shows that college women accepted menstruation rather routinely and did not perceive it as overly disruptive[25].

A qualitative study on women's knowledge and understanding of menstruation and PMS conducted in Winnipeg, Manitoba Canada. The sample consisted of 43 women who volunteered for intensive, semi structured interviews. Women were in the age range of 19-55 years with a mean of 34.4 years. The majority of women (48.8%) were single, and most women were highly educated. 32 women (74.4%) of the sample experienced PMS. The majority of women in the study tend to characterize PMS as an unwanted condition and most women placed changes associated with the menstrual cycle within the PMS label[26].

The knowledge, beliefs, and practices of registered dieticians related to omega-3 (n-3) fatty acids and premenstrual syndrome symptoms were examined using a cross sectional survey design. Illinois based dietetic association members completed an online questionnaire. Most (99%) registered dieticians believed n-3 fatty acids were important for health. Registered dieticians were less familiar with research linking n-3 fatty acid intake and PMS symptoms severity (31%). Many registered dieticians (82%) consumed high n-3 fatty acids food during the previous week and 30% dieticians were taking n-3 fatty acids supplement. Registered dieticians not reporting PMS symptoms had significantly higher n-3 fatty acid consumption (7.2g/wk) than those reporting PMS symptoms (4.3 g/wk)[27].

A cross sectional study was carried out among 500 school going adolescent girls in Bilaspur, India among four schools of which two English medium (n=200) & two Hindi medium (n=300) were randomly selected. They were asked a set of 33 questions related to various aspects of reproductive health. About two third girls were aware about signs of adolescence and 88.8 % were aware about the needs of healthy life.[3]

A study was conducted in Korea to find the effect of an educational programme that will help to alleviate women's signs and discomfort associated with PMS. A sample of 100 women in the age group of 15 to 40 years were given an educational programme on PMS and its management after giving a pretest. After 3 months again the women were given (post test) the same questionnaire. The study findings revealed that 85% women had an increase in mean knowledge scores and decrease in prevalence mean scores of PMS when compared with pretest scores. [28]

Yet another study was conducted in Bangalore among 48 Indian women about menstrual attitudes on socio cultural and pre-menstrual experience using a menstrual attitude questionnaire which was modified and adapted for Indian background. Higher percentage of women perceived menstruation as a natural event, least percent as debilitating one. Older women considered menstruation as a natural event when pre-menstrual experiences were related to attitudes. It was observed that distressful symptoms correlated significantly with debilitating and unhealthy attitudes, pre-menstrual well being correlated highly with natural attitudes.[29]

A study was conducted to verify the presence of certain psychological factors in women complaining of the PMS which would differentiate those women from others. A sample of 25 women in reproductive age group with PMS were in the

experimental group and 23 women who did not suffer with PMS had significantly higher levels of trait anxiety neuroticism and more negative attitude towards their bodies, genitals, sex and masturbation as measured by a "Role Acceptance Scale". Both PMS suffers and controls held negative attitude towards menarche and menses[30].

Another study done among black Zimbabwean women (twenty-five professional women and twenty-five domestic workers) to explore their menstrual and premenstrual experience using semi structured, open-ended interview. An analysis of consensual data indicated a number of predominant themes, including secrecy associated with menstruation, the negativity surrounding menarche, the breakdown of the traditional family network that passes on information about menstruation, and the acceptance of menstrual cycle experiences by the women. These differences are suggestive of the impact of educational level on experiences of menstruation.[31]

Yet-another qualitative research conducted in Brazil among 20 women to describe the perceptions of women with premenstrual syndrome regarding the behaviour of their spouses in face of this event. Women interviewed are represented in the following categories. Difficulties in identifying the syndrome and in adopting care practices, lack of knowledge and sensitivity of men and, its impact on the couple relationship.[32]

Another study done in Bosnia and Herzegovina to determine the age at menarche and the most common symptoms of premenstrual syndrome (PMS) in adolescent girls with intellectual disability. The main method of data collection was through the use of a survey and an interview with the girls. The sample consisted of 31 adolescent girls with intellectual disability and 31 adolescent girls without intellectual disability serving as a control group. Both groups were between the ages

of 14 and 18 years. The results of this study revealed higher variability of age at menarche in girls with intellectual disability compared to girls without intellectual disability. The symptoms of PMS were almost equally distributed in both groups of girls. Many girls with intellectual disability do not have enough knowledge about menstruation & PMS[33].

2. Prevalence, frequency of symptoms and remedial measures of PMS

Premenstrual syndrome is an array of symptoms that occurs during the second half of the menstrual cycle. The symptoms typically include one or more of the following. Depression, tiredness, irritability, anxiety, headache, breast swelling, tenderness, craving for sweet or salty foods, constipation and skin acne.[34]

A study has been done in Tehran among 320 female Teacher training University students between the age group of 18-24. A pretested questionnaire was designed for data collection (DSM-IV). The study showed that the prevalence of PMDD was 16.9%. The commonest physical symptom was abdominal cramp. 229 (75.3%) and the commonest mental symptom was tiredness 225 (70.3%). The least common symptom was short breath 4 (1.3%). In this study, it is shown that nearly 50% of students who had PMS took drugs for decreasing their symptoms. 4% of them occasionally took drugs. Although, most of the Iranian women take herbal drugs for relieving symptoms, none of the participants in this study took herbal drugs because taking pharmaceutical drugs is easier than making herbal drugs in dormitory. In a similar study 37 students with PMS were taking drugs for physical and mental symptoms[34].

A cross sectional descriptive survey conducted in Thailand among 266 female students of Assumption University, Bangkok. The subjects were between 16-35 years and was selected by random sampling technique. Data was collected by using a self administered questionnaire. The result indicates PMS is very common among females at Assumption University. According to the data, more than 98% of the respondents reported one or more PMS symptoms. However, only 28% reported feeling of PMS symptoms before every period. When the respondents noticed PMS symptoms, 41.4% used paracetamol, 24.4% used Ponstan and 3.4% used Advil. Other non-pharmacologic treatments were sleep (75.9%), exercise (23%), and dietary change (10%)[35].

In India a descriptive study was undertaken among 300 B.Sc Nursing students in selected Nursing colleges in Mangalore, aged between 17-25 using stratified random sampling technique. Tool used was Premenstrual Tension Syndrome Scale. Study findings conclude the prevalence of PMS is 13.33%. Based on PMTS scale the majority (76%) of the samples had mild, 15% as moderate 7% as severe and 2% of the subjects reported to have no impairment. Commonest symptoms was experienced by the subjects who had PMS was abdominal discomfort. This shows that Premenstrual Syndrome is higher in younger aged women whereas performing relaxation technique reduces the severity of the Premenstrual symptoms[36].

Another cross sectional study was conducted in Ambajogani, Maharashtra among 350 adolescent school going girls from urban and 350 girls from rural school. The age of girls ranged from 10-18 years with maximum girls of 13 years of age were randomly selected. Data was collected through pretested Performa. Fullness in breast and abdomen, headache and irritability were the common premenstrual symptoms.

Significantly more rural girls (28.57%) were free from premenstrual symptoms than urban girls (6.82%) (z=3.60 P<0.05>). Average premenstrual symptoms per girl was higher in urban than in rural girls[37].

A cross sectional survey was conducted among 242 randomly selected female students of Jimma University, Ethiopia. The age of the participants ranged between 17-38 years. A structured and pretested self-administered questionnaire was employed for data collection. DSM-IV was used to diagnose PMS. The prevalence of PMS was 27%. This study reveals that about 40% rated their symptoms as minor, 33.2% as moderate, 22% as severe and 5% as extreme. This is much higher than many reviews which reported in the range of 5-10%. Regarding remedy usage, 91(37.8%) students used remedies to relieve their symptoms. Forty-one (17%) used 'antipains', 2(0.8%) used oral contraceptives. Hot shower, hot drinks or herbal medicines were used by 17(7.1%). Statistically significant association was found between severity of PM symptoms and remedy usage (P<0.005) as well as treatment seeking (P<0.005)[38].

A study was conducted among 250 female medical students at King Faisal University, Saudi Arabia. The data was collected through questionnaire covering American College of Obstetrics and Gynecology (ACOG) criteria to diagnose PMS. Premenstrual Syndrome was diagnosed in 35.6% of cases, distributed as 45% mild, 32.6% moderate, 22.4% severe. The frequency of somatic symptoms were abdominal bloating (75.3%) breast tenderness (65.0%) headache (44.9%) whereas the distribution of affective symptoms were confusion (38.2%) irritability (37%) angry outbursts (33.7%) anxiety (33.7%) depression (31.5%) and social withdrawal (25.8%)[39].

A study conducted in Korea to assess and compare premenstrual changes in women workers and housewives, a self rating retrospective premenstrual assessment form (PAF) was administered to 184 women workers and 163 housewives who reported premenstrual changes. The most commonly reported changes in mood and behavior were major depressive syndrome (22.3% vs 26.4%), impulsive syndrome (23.4% vs 25.2%) in both subjects. The most commonly reported changes in physical condition were general discomfort (65.8% vs 62.0%), fatigure(51.1% vs 32.5%). 51.1% and 45.4% of each subjects reported impaired social function. Regarding physical conditions housewives more frequently reported water retention syndrome. On the other hand women workers reported fatigue syndrome more frequently[40].

The longitudinal cohort study was conducted in 1982 in the hospitals of Pelatos city, Brazil. In that study first follow up questionnaires were distributed to the mothers in the maternity hospital and the next follow up was done with home visit and in the follow up visits during adolescence, questionnaires were applied to mothers and the girls themselves. In the last follow up with the entire cohort done from October 2004 to August 2005. Data were collected on the intensity of four symptoms -irritability, anxiety, depressed mood and affective liability. The prevalence rates for moderate and severe premenstrual syndrome were 13.4% and 5.8% respectively[41].

A study conducted among adolescent school girls in the United Arab Emirates aged 12 – 18 years, were selected from five private and five public schools (n=700) in Al-Ain city using a multi stage stratified cluster sampling technique. The data was collected using a structured and validated questionnaire based on the American College of obstetricians and Gynecologists' criteria. The prevalence of premenstrual syndrome was 16.4%. Only 52 affected subjects (45.2%) were currently taking

treatment for premenstrual syndrome and the majority (60%) used pharmacological therapy[42].

The prevalence of reported PMS was estimated from a population-based cohort of 2863 French women interviewed in 2003 and 2004. Results shows that 4.1% of women qualified for severe PMS (six symptoms) and 8.1% qualified for moderate PMS(one to five symptoms). 12.2% of women who reported PMS symptoms that impacted their daily lives[43].

Yet another cross sectional population-based study carried out in Brazil in the year 2003, involving 1395 women aged 15-49 years in a medium-sized municipality. Questionnaire was applied to measure the prevalence of Premenstrual syndrome. The obtained prevalence was 25.2 % and self reported prevalence was 60.3 %. The principal premenstrual symptoms found were irritability, abdominal discomfort, nervousness, headache, and fatigue and breast pain; all of this showed the prevalence of over 50%. Psychotropic drug users and women who were not using any hormonal contraceptive presented higher prevalence of the syndrome[44].

Yet another study conducted in Iran among 280 students of Tehran University of Medical sciences, to determine PMS in subjects, the criteria used was ACOG (American College of Obstetricians and Gynecologists). Among the subjects 140 were swimmers, while 140 were controls. PMS occurred in 36.2% and 22.8% of non-swimmers and swimmers, respectively. The prevalence of premenstrual symptoms differs in the two groups. The prevalence of feeling more irritable, tend to eat more than usual, easily distracted, feeling more angry, physical symptoms, change in mood without reason, significant swelling in breast, ankles, abdomen and decreasing desire to have communication with males were significantly lower in swimmers[12].

Complementary/ alternative therapies have grown in popularity in recent years, and a population survey in the Unites States showed that they have been used more by women (39%) than men (31%). Surveys of women in the United States and United Kingdom found that those with PMS had tried a range of complementary / alternative therapies including diet, yoga, massage, exercise, faith healing, hypnosis, Chinese herbs, acupuncture, meditation, homeopathy and vitamins/supplements. In the case of PMS number of studies has examined the role of aerobic exercise and evidence suggests this may be an effective therapy for PMS. In a large survey over 1800 women found that exercise was used by over half of the women as a self- help method for alleviating PMS symptoms[45].

A study done in Israel among 9 regularly menstruating women with PMS were compared with 9 healthy age-matched women without PMS. The diagnosis of PMS was determined according to shortened premenstrual assessment form. They were aged between 20 and 40 years and had BMI within the reference range (19-25). However during the late luteal phase, ankle edema was present only in women with PMS[46].

A study conducted in Thailand among 423 nurses using premenstrual symptoms screening tool (PSST) the prevalence of PMS in Thai Nurses was 25.1%. Nurses with younger age, nulli gravida, lower income, more coffee consumption, dysmenorrhea and negative attitude towards menstruation has higher prevalence of PMS[47].

A study conducted on the prevalence of PMS in Indian women in New Delhi among 62 women using a structured proforma to determine the prevalence of PMS.

The study results showed that the PMS was found in 50% of women, with mastalgia being the commonest symptoms followed by abdominal bloating.[48]

A descriptive study conducted in USA to examine the prevalence of premenstrual breast symptoms and the impact of cyclic mastalgia in Mary Land Obstetrics and gynecological clinic (n=117) using a questionnaire. Findings showed that 69% of women reported regular premenstrual discomfort, 36% had consulted a health care provider about the symptoms. Cyclic mastalgia was found in 11%. Mastalgia interfered with usual sexual activity in 48% of women and with physical (37%). Social work (12%) or school activity (8%).[49]

A study done on prevalence and severity of PMS and effect of foods and beverages that are sweet or high in sugar content in Corvallis. A sample 853 female university students were using a questionnaire. Analysis of the data revealed that onsumption of foods and beverages that were high in sugar content was associated with prevalance of PMS.[50]

A study conducted to examine the pattern and incidence of premenstrual symptoms in users and non users of oral contraceptives. A sample of 181 women from the general population (mean age 30 years) were given a modified version of the moos menstrual distress questionnaire daily for 70 days. The study results showed a very high incidence of premenstrual changes, 40% of women demonstrated increase in each symptom. 50% of women experienced increase in negative effect and over 7% experienced increase in fluid retention. Oral contraceptive use did not alter the incidence or severity of premenstrual changes. Oral contraceptive users reported higher levels of fluid retention and somatic symptoms than non oral contraceptive users[51].

A study done in USA among 104 couples to assess the coping and premenstrual sympomatology using interview schedule. The findings revealed that the high symptoms families used spiritual coping strategies more frequently than low symptoms families (R=0.427, p=0.003 in women p<0.001 in men). Husbands of women with high symptomatology reported that their families used this passive approach to a significant degree.[52]

A study conducted in Karachi, Pakistan to determine the prevalence of PMS among 1600 women in the reproductive age group using interview schedule. The results revealed that 33% had PMS and the prevalence was high in lower socio economic group living in socially deprived areas. A direct association of PMS noted with parity, being low in low parity group. Major complaints were pain in lower abdomen, cramps and back ache with majority taking no treatment for their complaints[53].

A study done among 100 Icelandic women to assess the premenstrual changes between the age group of 29 to 40 years to measure premenstrual symptoms by using a retrospective instrument adapted from Hal Briech and colleagues premenstrual assessment form. More than 40% of the women were reported that the common symptoms that they experienced were bloating, mood swings, irritability and abdominal discomfort. In general women responded to their symptoms by taking some time to relax and taking pain medication[54]

A study conducted in USA to examine the diagnosis and treatment experiences of 220 women in the age group of 26-56 years were interviewed. Results revealed that 76% subjects reported that PMS diagnosis resulted from their own suggestions, 81% reported that the initial suggestion of PMS came from a non

medical source. The most commonly recommended and used treatment were Vitamins, exercise and diet modification. Fifteen percent were not very satisfied with treatment, 48.8% somewhat satisfied, and 35% very satisfied. Satisfaction was higher in natural progesterone or hysterectomy with oophrectomy were included as a treatment. [55]

A comparative clinical trial conducted in Kanpur GSVM medical college to evaluate the efficiency of bromocriptine over placebo in the management of premenstrual tension. A sample of 15 women with severe PMS participated in a 6 month study which included 2 months of control cycle followed by bromocriptine 2.5mg/day or placebo for the next 4 months. Symptoms were evaluated using the calendar of premenstrual experiences. The results showed that bromocriptine was effective in managing PMS symptoms specially mastidynia ($p=0.0312$) and fluid /electrolyte ($p=0.0312$) symptoms than placebo.[56]

The review of literature thus gave the researcher the confidence to go ahead with the study as most of the studies conducted revealed the fact that awareness or knowledge on premenstrual syndrome is very much limited among the general public.

METHODOLOGY

4. Research Methodology

The methodology of research indicates the general pattern for organizing the procedure for gathering valid and reliable data for investigation. It represents the framework of the study. This chapter presents the description of methodology and the different steps that were taken to collect the data and organize the data for investigation. It includes description of research approach, research design, setting, sample, sampling technique, development and description of tool, pilot study, data collection and the plan for data analysis.

Research Approach

The choice of an overall research approach constitutes one of the major decisions that must be made in conducting the research study. A research approach provides the researcher with information as to what data to collect and how to analyze it. It also suggests possible conclusion to be drawn from the data. In view of the nature of the problem, selected for the study and the objectives to be accomplished, a descriptive approach was considered for the present study.

Research Design

The research design of a study spells out the basic strategies that researchers adopt to develop evidence that is accurate and interpretable. The research design incorporates some of the most important methodological decisions that researchers make. Thus it is important to understand design options when embarking on a research project. It determines how the study will be organized, when data will be collected and what interventions if any, will be implemented. The research design selected for this study was descriptive design.

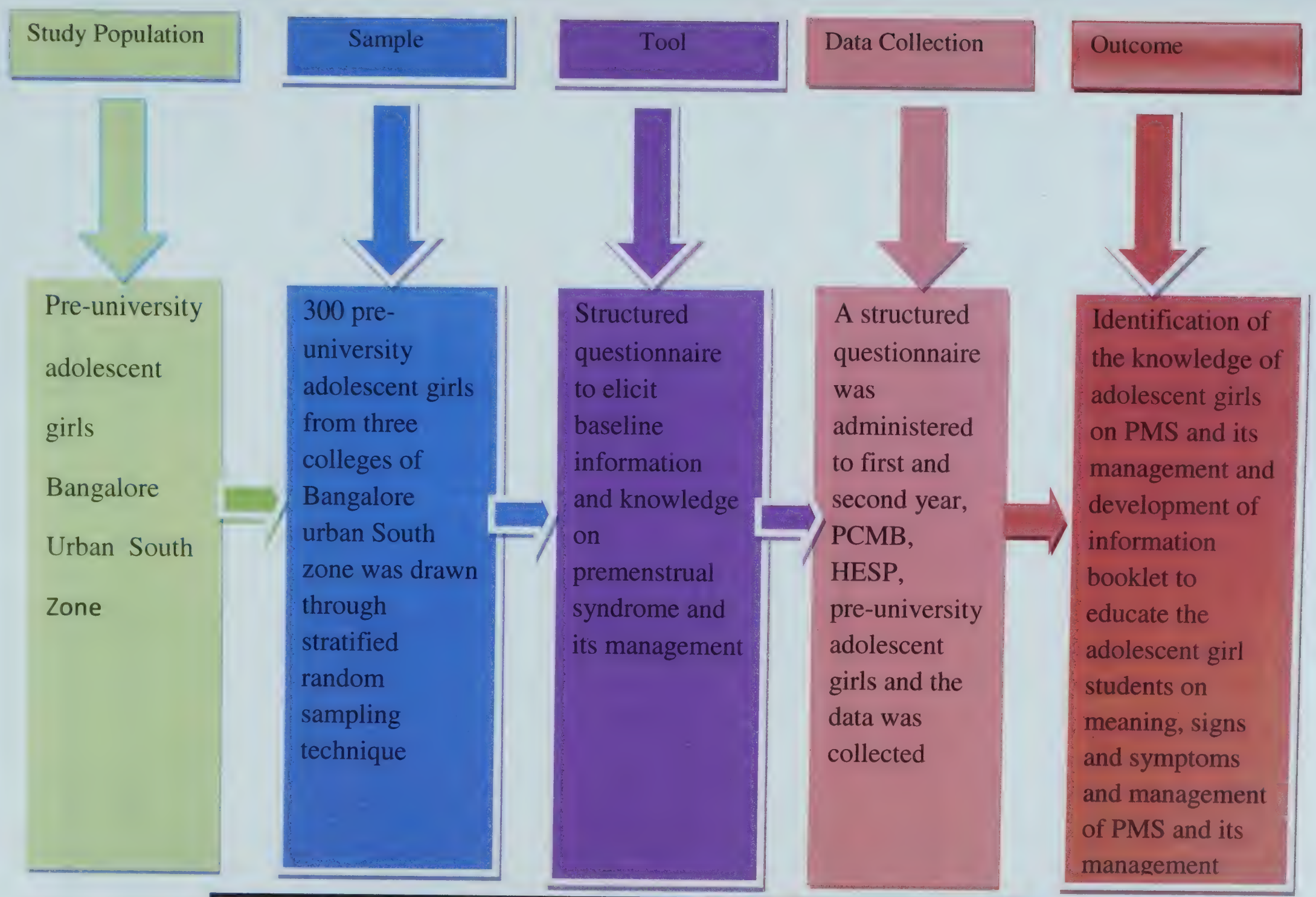
Study Population
Sample
Tool
Data Collection
Outcome
Pre-university adolescent girls Bangalore Urban South Zone
300 pre-university adolescent girls from three colleges of Bangalore urban South zone was drawn through stratified random sampling technique
Structured questionnaire to elicit baseline information and knowledge on premenstrual syndrome and its management
A structured questionnaire was administered to first and second year, PCMB, HESP, pre-university adolescent girls and the data was collected
Identification of the knowledge of adolescent girls on PMS and its management and development of information booklet to educate the adolescent girl students on meaning, signs and symptoms and management of PMS and its management

Figure 2 – Schematic representation of the study design

Variables

A variable is a characteristic or quality that varies from one person or object to another.

Two types of variables are identified in this study.

1. Study variables

2. Baseline variables

Study variables:-

Knowledge of PMS among adolescent girls at selected colleges

Baseline variables:-

The baseline variables in this study are age, year of education, stream of education, age at menarche, previous information about PMS and source of information about PMS.

Setting of the Study

The study was conducted in three selected Pre University Colleges at Bangalore Urban.

Population

According to Polit and Hungler population is defined as the entire aggregate of cases that meet the designed set of criteria. The study population comprised of Pre University adolescent girls studying in colleges of Bangalore urban.

Sample

A sample is a small portion of the population for observation and analysis. The sample for this study consisted of Pre University adolescent girls of three selected colleges who have selected science and arts group as their stream of education.

Sample Size

In this study sample size comprised of 300 adolescent girls studying in first year and second year Pre University course [150 science (PCMB) and 150 arts (HESP)] from three colleges at Bangalore urban.

Sampling technique

According to the department of Education, colleges at Bangalore are divided into Bangalore North and Bangalore South Zone for administrative purpose. For the present study colleges of Bangalore South Zone has been selected. From the selected colleges, three affiliated Pre-University colleges which had both science and arts group were selected purposively. The students were stratified according to the stream of education – science and arts, year of education first year and second year. Random sampling by lottery method without replacement was used to select the 25 samples from each stratum.

Pre-University colleges selected for the study are:

1. Jyothi Nivas PU College
2. Bishop Cotton PU College
3. St. Anne's PU College

Sampling Criteria

Inclusion Criteria

Adolescent girls (age group of 15-19 yrs) of first and second year pre-university course who had chosen science (PCMB) and arts (HESP) as their stream of education at three selected urban colleges, Bangalore.

Adolescent girls who have attained menarche.

Exclusion Criteria

Students who were not willing to participate in the study.

Students who were absent during the data collection period.

Development of the Instrument

The instrument was developed based on the literature review from

- Text Books
- Journals
- Internet surfing
- Experts in the field of Community and Obstetrics

Description of the Instrument

Section 1 – Base line data

This section consisted of 6 items seeking information about age, year of education, stream of education, age at menarche, previous information and source of information about Premenstrual Syndrome.

Section 2 – Questionnaire to elicit knowledge

A structured questionnaire for assessing the knowledge on Premenstrual Syndrome and its management. It consisted of 30 items each with four options, the respondents were instructed to tick the correct options in the appropriate space provided. Each right answer was given one mark and each wrong answer carriers zero mark. The maximum possible score was 30.

Preparation of the blue print

A blue print was prepared prior to the construction of the knowledge questionnaire based on which items were developed.

The knowledge questionnaire included three domain and items were distributed for each domain as follows.

Knowledge (15 items – 50%)

Comprehension (9 items – 30%)

Application (6 items – 20%)

Categorization of the knowledge score

To analyze the data the knowledge was categorized arbitrarily as follows:

Inadequate	≤50%
Moderately adequate	51 to 74%
Adequate	>75%

Tool Validation and Reliability

Content Validity

Content validity of the tool was established by 13 experts, from different fields such as Department of Community Health Nursing, Department of Community Medicine and Department of Obstetrics and Gynaecology. Among them were nine nursing experts and four doctors. Based on the suggestions given by the experts on various items in the questionnaire, corrections were made and the tool was modified.

Reliability

The reliability was done using split half technique. The tool was administered to 30 samples and reliability was established by computing 'r' using Spearman Brown's prophecy formula & Pearson's product moment correlation method. The 'r' value obtained was 1 positive perfect correlation. Thus the tool was found to be reliable.

Pilot study details

The purpose of the pilot study was

- To check the feasibility of the study
- To test the data collection instrument
- To determine the method of statistical analysis

After obtaining written permission from the Principal of St. Francis PU College, the pilot study was conducted between 1st to 08th June 2010. Based on the inclusion criteria 30 adolescent girls were selected by stratified random sampling technique. From first and second year classes, 5 students each from HESP, HEBA & PCMB course was selected. Lottery method was used to select these 5 students from each

stratum. The selected samples were grouped in a class room and questionnaire was distributed among them. The investigator first introduced herself to the participants and explained the purpose of the study and their verbal consent was obtained. Investigator assured the confidentiality of the information received. The time taken to answer the questionnaire was 15 – 20 minutes and the answer sheets were collected back. The collected data was tabulated and analysed with descriptive statistics. The results of the pilot study were presented and necessary corrections were made as suggested by the guides and research committee.

Suggestions:

Include two more PU Colleges having HESP and PCMB course

Total sample size 300

Data Collection Method

Data collection was done from 24/06/10 to 20/07/10

Three Pre University Colleges in Bangalore Urban were selected purposively

A formal written permission was obtained from concerned College Principals

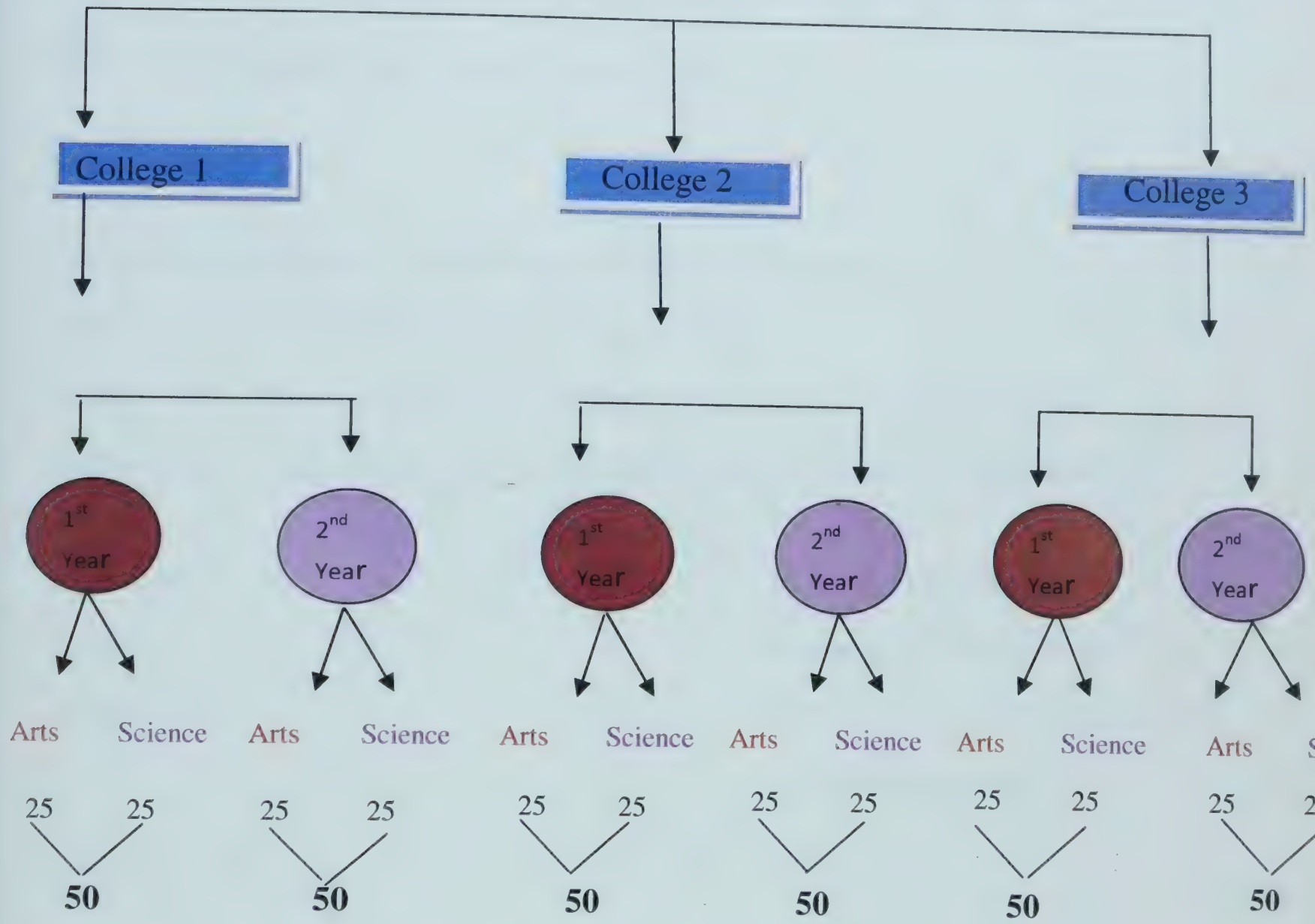

Figure 3 Schematic Process of the Sampling process

The students were stratified according to stream of education Science (PCMB) & Arts (HESP) and year of education – (first year and second year). Lottery method (without replacement) was used to select the 25 samples from each stratum.

The investigator first introduced herself and explained the purpose of the study and consent was obtained before collecting the data.

The demographic variables and the knowledge level of adolescent girls regarding PMS and its management was assessed using a structured questionnaire. The selected samples were grouped in a classroom and questionnaire was distributed among them. The time given to answer the questionnaire was 15 – 20 minutes and the answer sheets were collected back. On an average 50 samples per day were collected. Thus the 300 samples were collected within 6 days.

Data Analysis

The analysis of the data is organized and presented as follows:

Section – I Description of the baseline variables

Section – II Distribution of the adolescent girls based on knowledge score

Section – III Association between the knowledge and the baseline variables

Objectives	**Statistical Method**
Objective – I	Frequency & percentage
Objective – II	Range, mean, mean percentage & Standard deviation
Objective – III	Chi Square

RESULTS

RESULTS

5. Results

Statistical analysis is a method of rendering quantitative information that is meaningful and intelligible. Statistical procedure enables the research to reduce, summarise, organise, evaluate, interpret & communicate numerical information. This chapter deals with the analysis & interpretation of data collected from 300 selected Pre-university college going adolescent girls, Bangalore urban. The analysis was done based on the objectives and the hypothesis of the study

Objectives of the Study:

1. To assess the knowledge of adolescent girls regarding Premenstrual syndrome and its management
2. To find the association between knowledge and selected baseline variables.
3. To develop an information booklet for adolescence girls regarding Premenstrual Syndrome and its management.

Presentation of data

Section A: Description of the baseline variables

Section B: Distribution of knowledge of adolescent girls regarding premenstrual syndrome and its management

Section C: Association of knowledge with selected baseline variables

Statistics used for analysing data:

Descriptive statistics

The data was analysed as follows: First the descriptive statistics were computed. These include range, mean, Standard Deviation for quantitative variables and category frequency counts and percentages for qualitative variables. Next inferential analysis was under taken as follows:

The chi-square test was used to compare the frequency distributions (proportions) of categorical variables across the groups .Then Pearson correlation coefficient were computed to test strengths of the relationship between quantitative variables . An association between knowledge score and baseline variables of the girls were calculated at 0.05 level of significance.

SECTION A : DESCRIPTION OF BASELINE VARIABLES OF ADOLESCENT GIRLS

This section describes the distribution of sample according to the baseline variables such as age, year of education, stream of education, age at menarche, prior information about PMS, source of information about PMS of the adolescent girls from selected colleges at Bangalore urban .Then the data of sample characteristics were analysed using descriptive statistics such as frequency, percentage and presented in table and diagram as given below

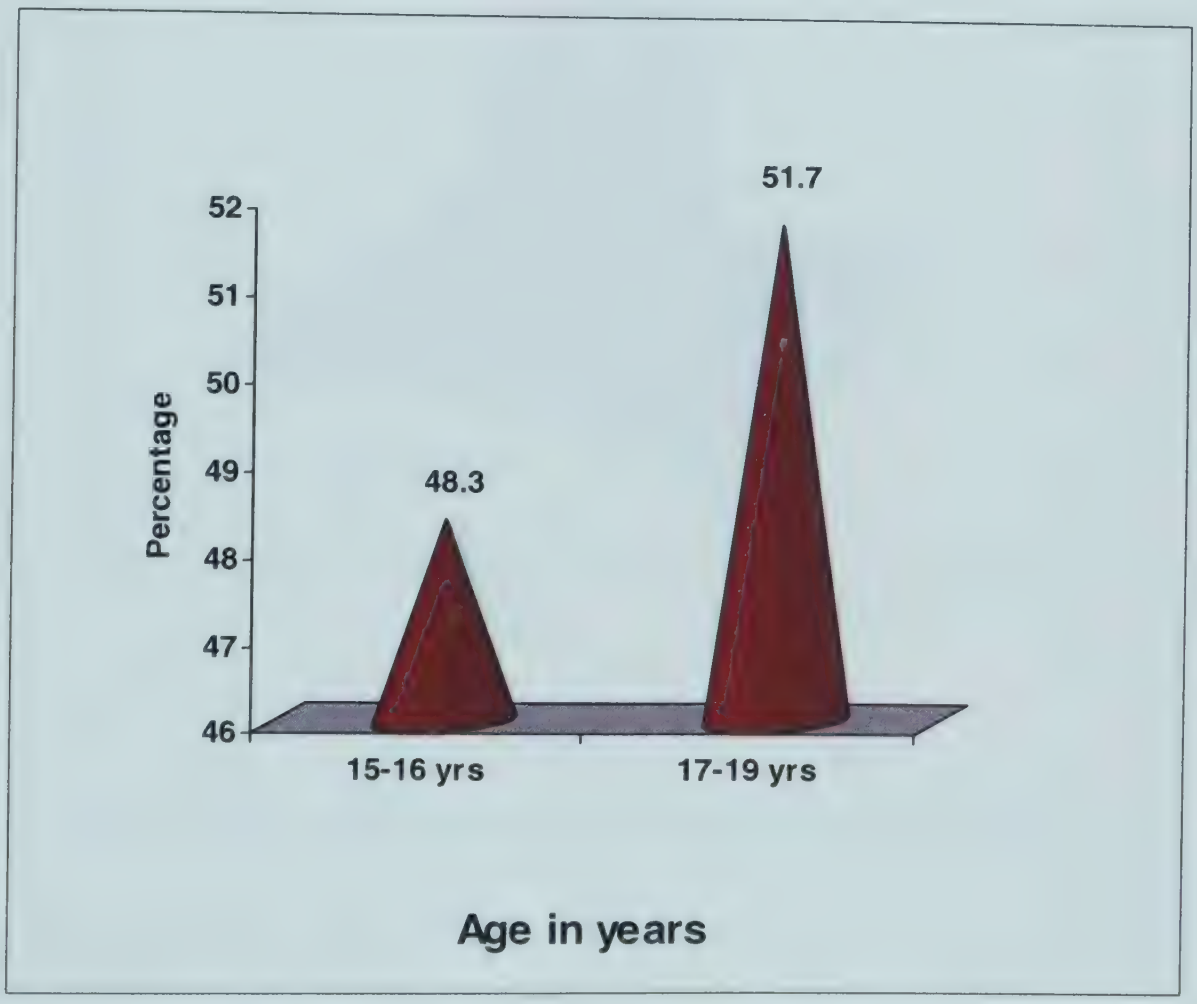

Figure 4 :- Distribution of Subjects based on age

The age of the sample ranged from 15 to 19 years with the mean age of 17.(Age has been stated in completed yrs)

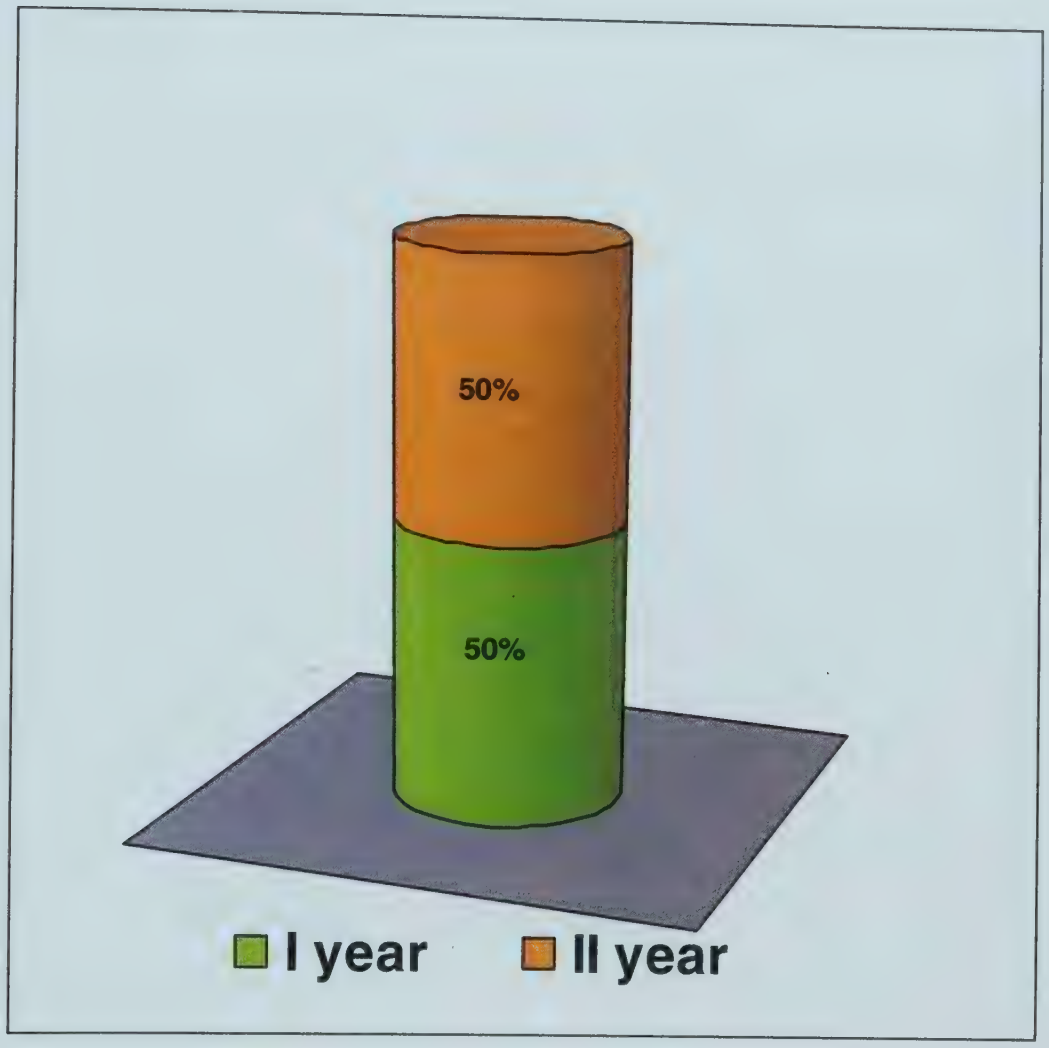

Figure 5 : - Distribution of subjects based on year of education.

The above figure shows that Year of education (I & II year PUC) of the samples represented 50 % equally.

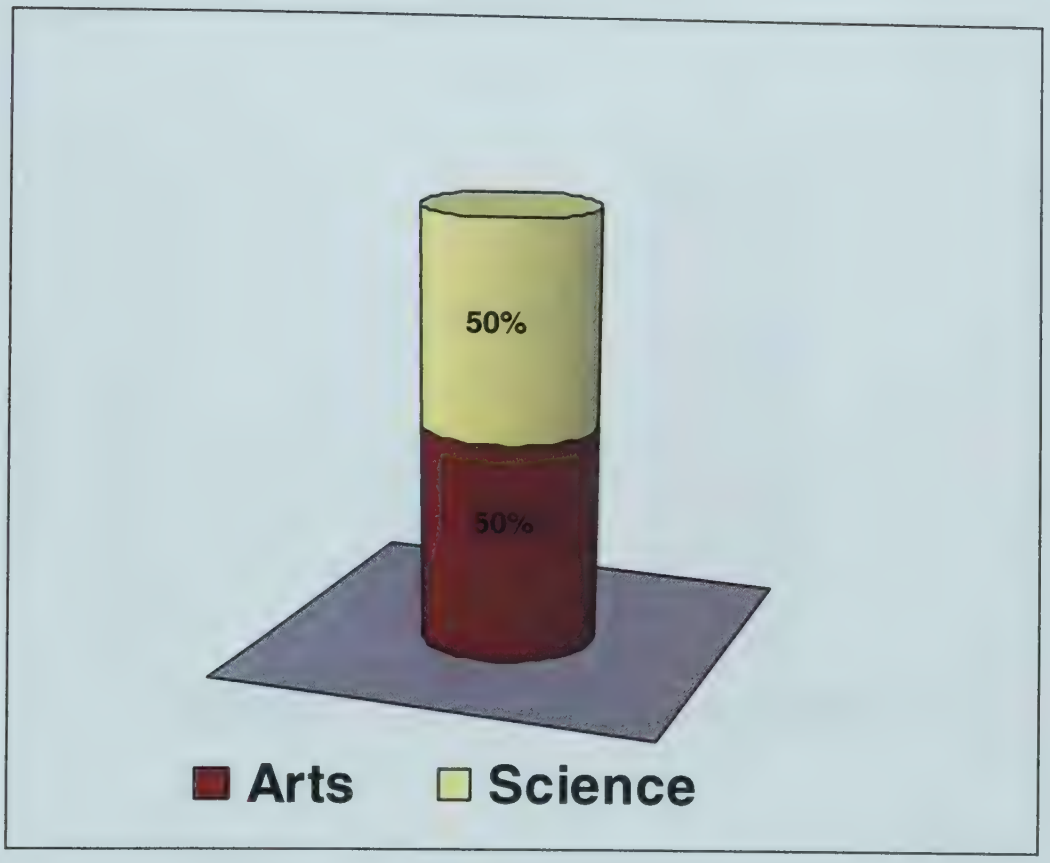

Figure 6 :- Distribution of subjects based on stream of education

The above figure shows that stream of the education of the sample represented 50 % (150 samples) equally.

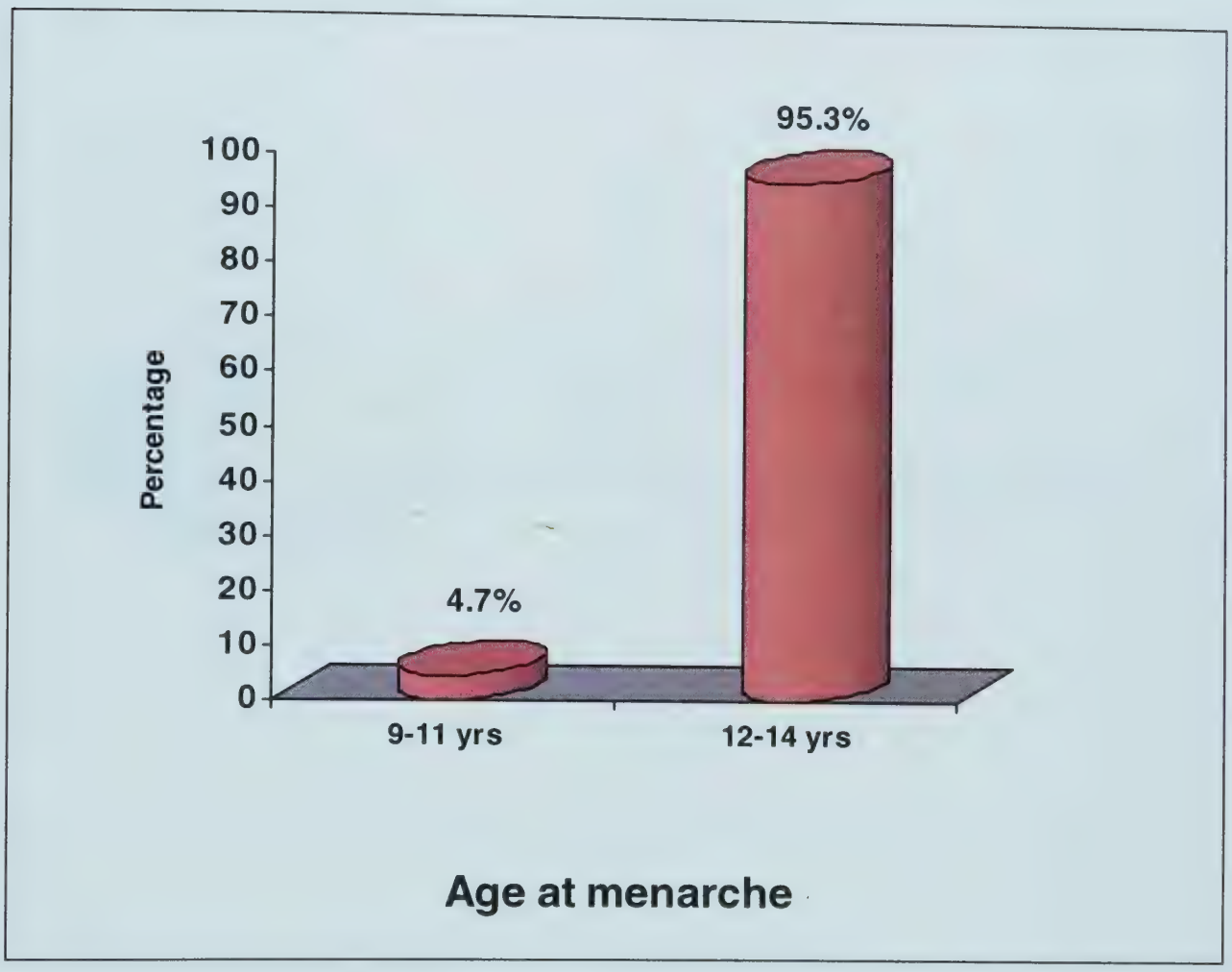

Figure 7 : - Distribution of subjects based on age at menarche

The above figure shows that 95.3% (286) samples were between 12-14 years and 4.7% (14) samples were between the age of 9-11 years.

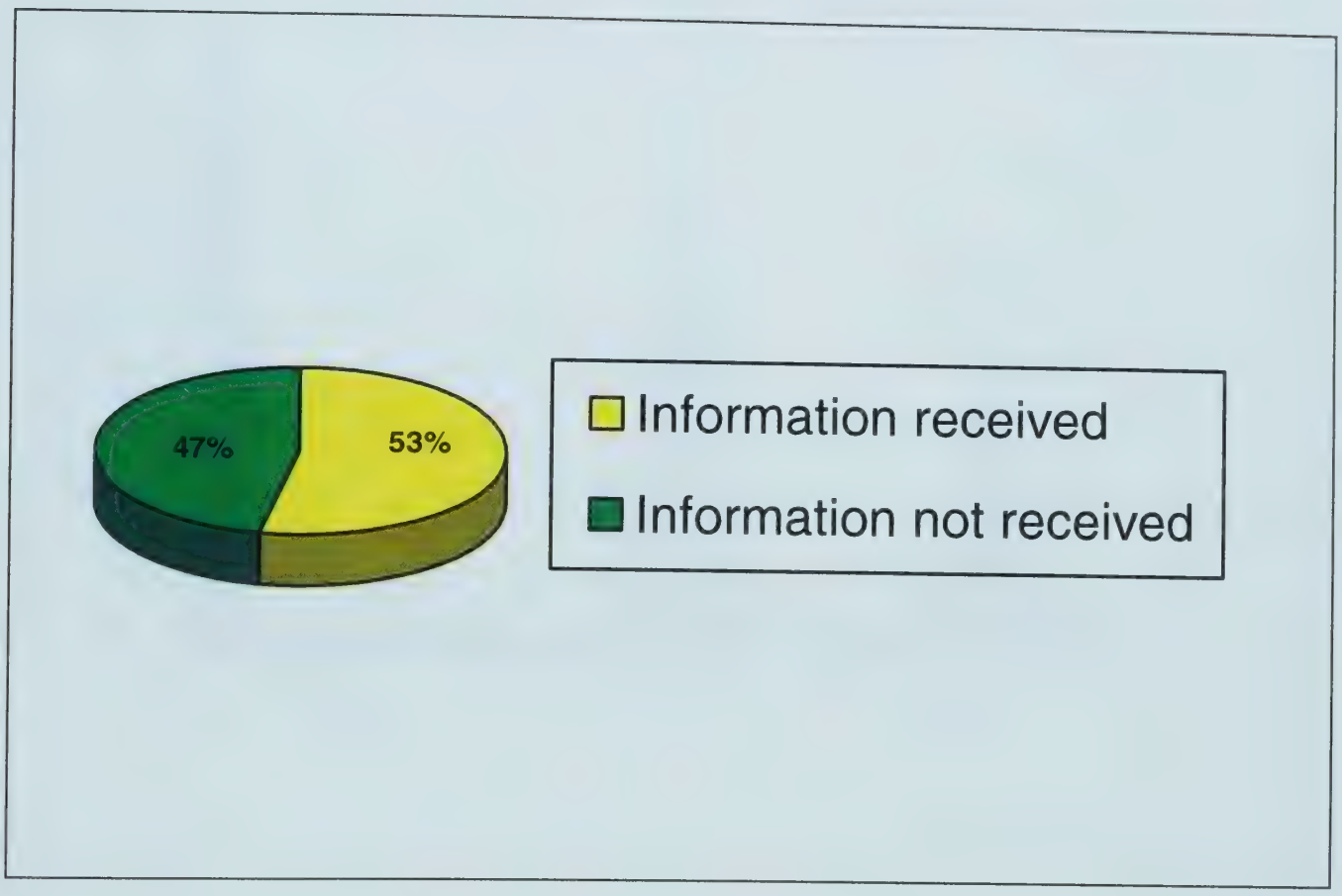

Figure 8 :- Distribution of subjects according to Previous knowledge received

The above figure shows that 53% (159 samples) had previous information about PMS and 47% (141 samples) did not have previous information about PMS.

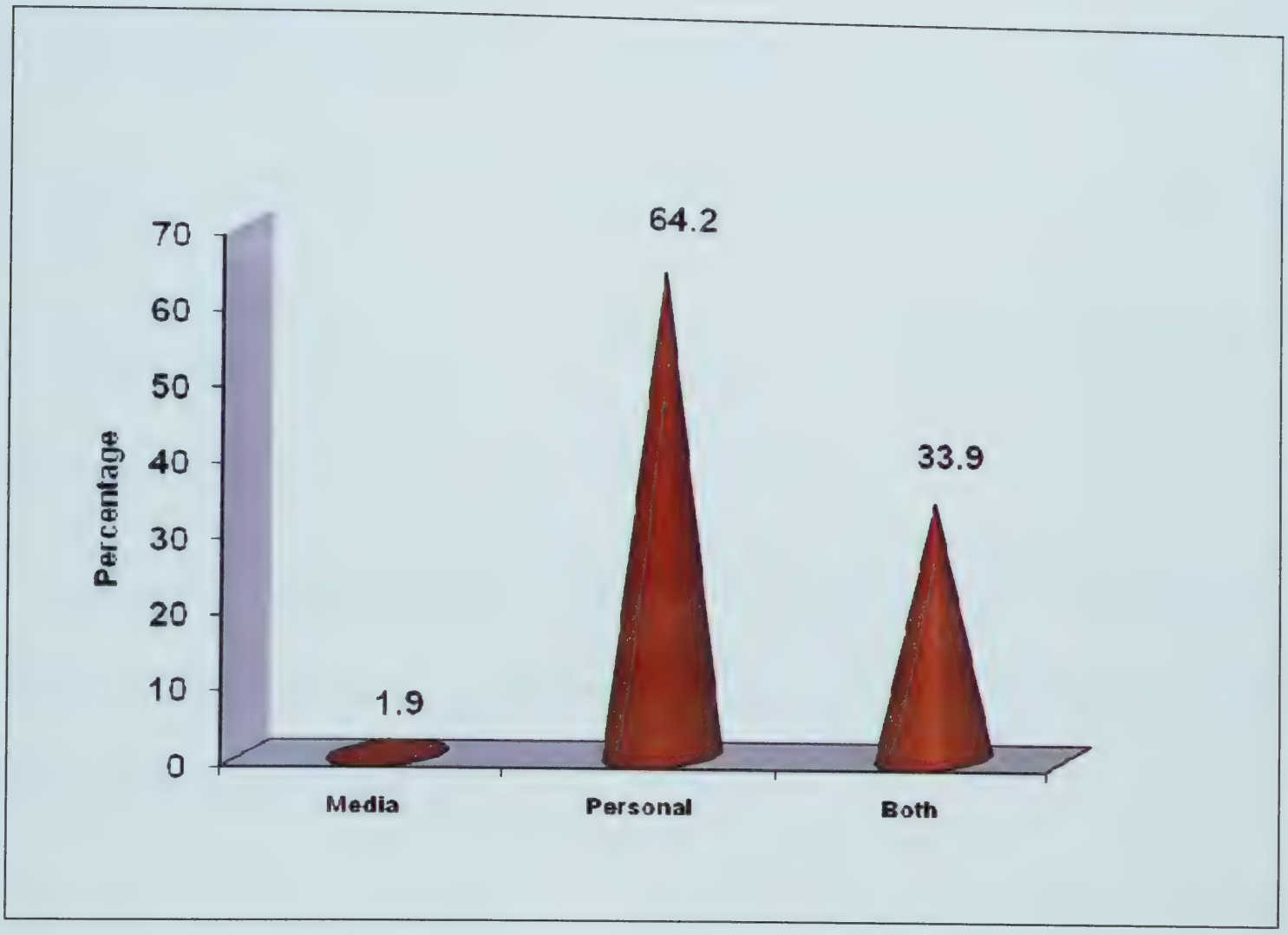

Figure 9 : - Distribution of subjects based on source of information

The various source of information were television, internet, newspaper (Media) and Mother, friends, relatives and teachers (Personal)

Majority of the sample (64.2%) got information from Personal.

SECTION B: DISTRIBUTION OF KNOWLEDGE OF ADOLESCENT GIRLS REGARDING PMS AND MANAGEMENT

TABLE1: Overall Knowledge of adolescent girls regarding PMS and its management

n=300

Knowledge Score	Frequency	Percentage	Range Obtained	Mean Score	SD
Inadequate (<=50%)	262	87.3	7-15	11.82	2.2
Moderately adequate(51-74%)	38	12.7	16-19	16.63	0.78
Adequate(>=75%)	0				

Data presented in the table denotes that 87.3% of adolescent girls have inadequate knowledge and 12.7% have moderately adequate knowledge and none of them possess adequate knowledge.

TABLE 2: Mean, Mean percentage and SD of various aspects of knowledge of adolescent girls regarding PMS and management.

n=300

SL NO	various aspects of Knowledge	max score	range	mean	mean%	SD
1	Meaning	6	1-6	3.08	51.3	0.98
2	Causes	4	1-4	1.39	34.75	0.90
3	Signs and symptoms	10	1-10	3.49	34.90	1.35
4	Management	10	1-10	4.46	44.60	1.39
5	Total	30	7-19	12.43	41.43	2.62

Data presented in the table reveals that the total mean % score obtained by students in various content area regarding the meaning, causes, signs & symptoms and management of PMS is found to be 41.43%. Maximum is in the area of Meaning of PMS. The overall mean is 12.43. This shows that the adolescent girls in general, lack knowledge in PMS.

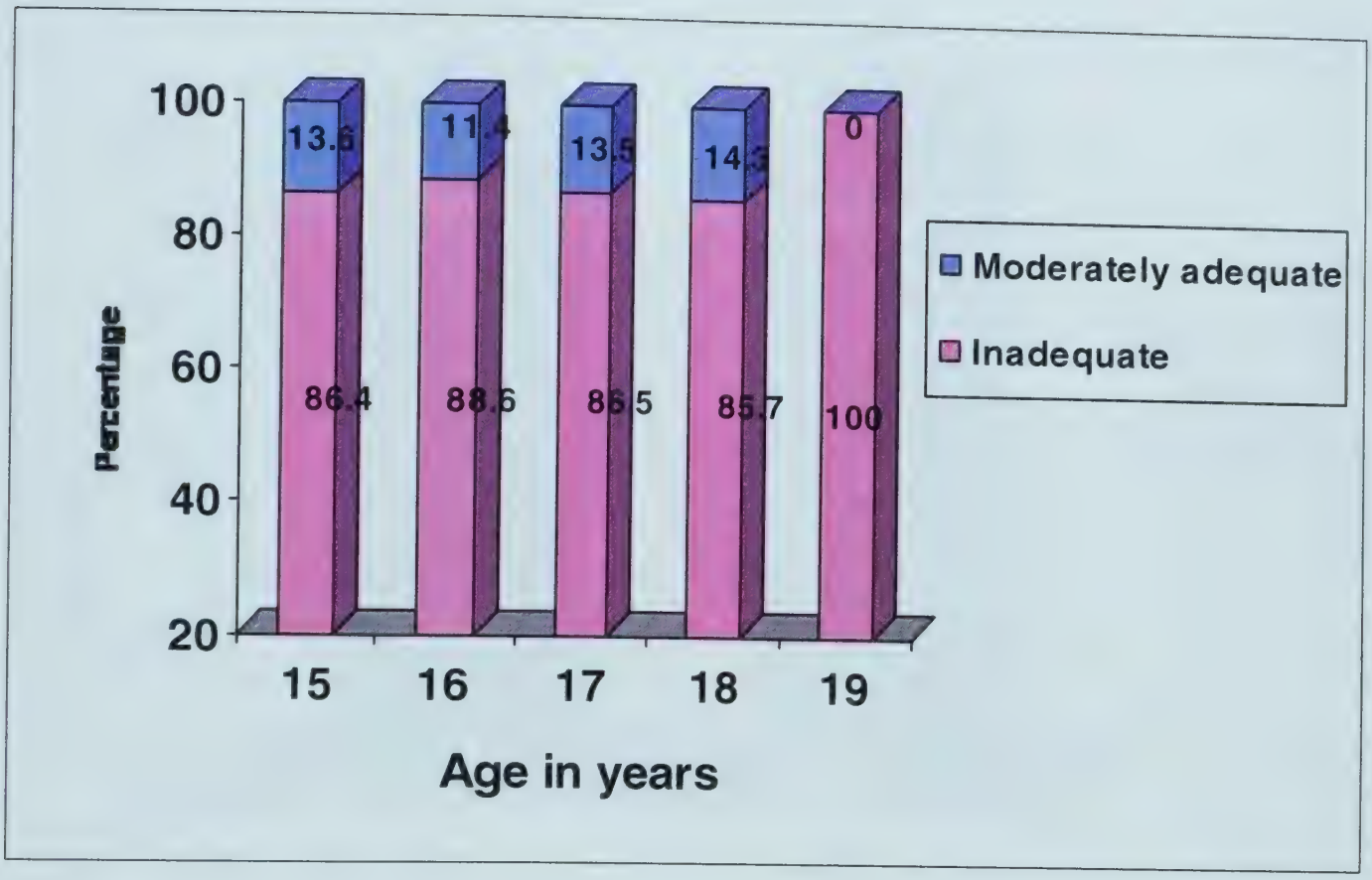

Figure 10 : - Knowledge scores based on students age

Data presented in the figure 10 shows that the adolescent girls in the age group of 15 – 19 years had inadequate knowledge. Age does not have any influence on Knowledge levels regarding PMS and its management.

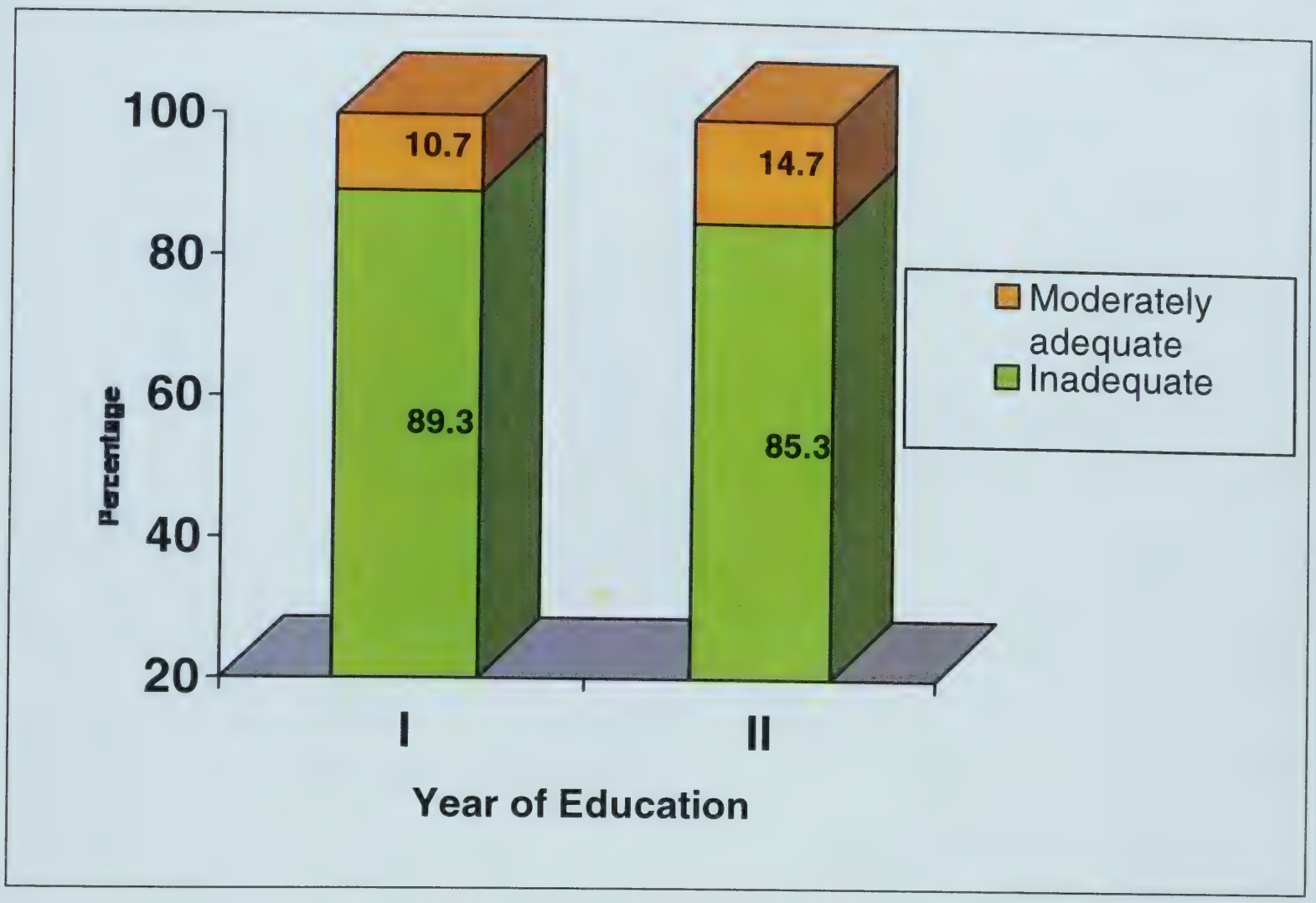

Figure 11 :- Knowledge score based on year of education

The above figure shows that second year adolescent girls have more knowledge than first year adolescent girls.

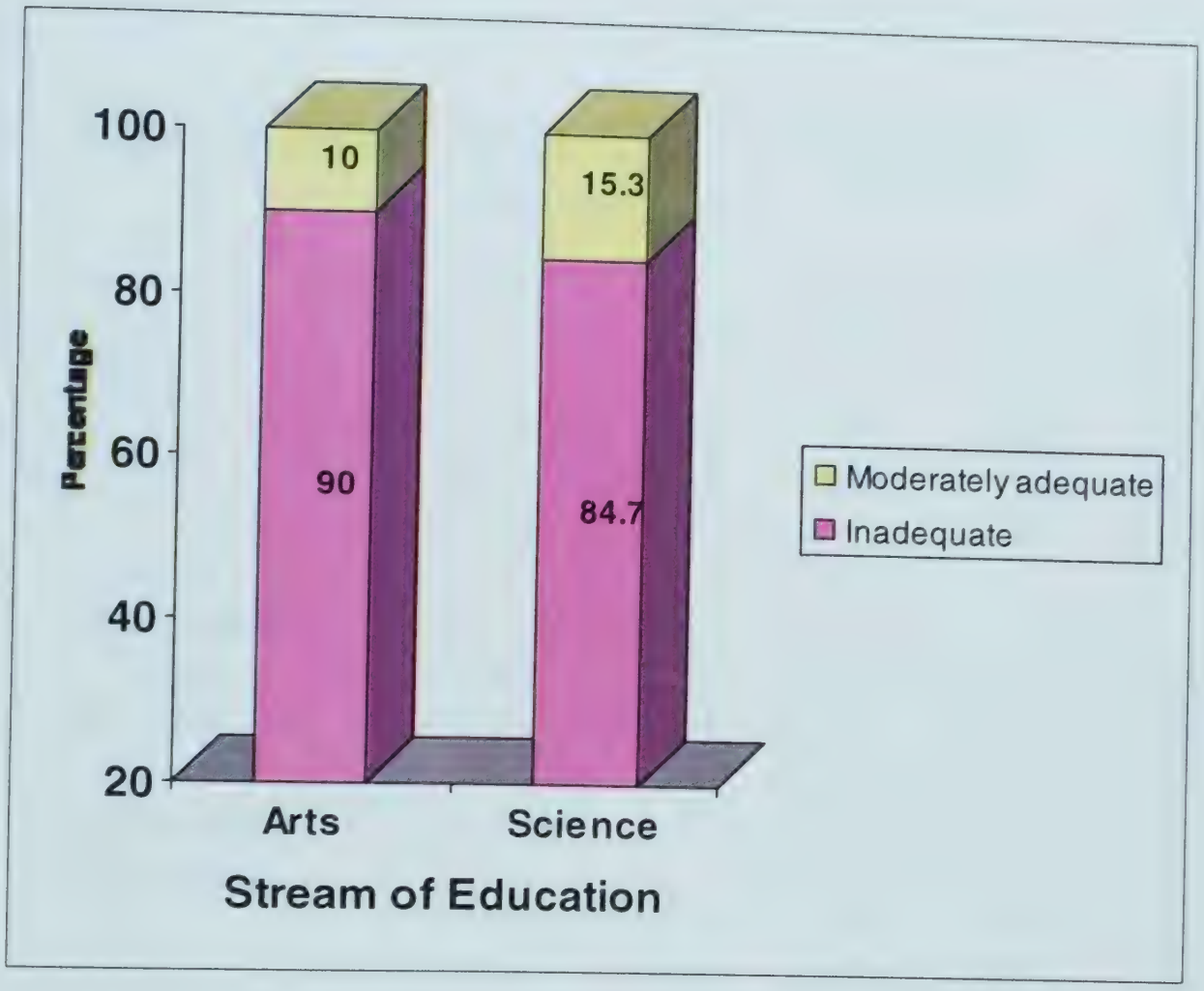

Figure 12 :- Knowledge score of the students based on stream of education

Data presented in the figure shows that most of the Science and Arts students' process inadequate knowledge (84.7% & 90% respectively). The data also reveals that the knowledge score of PCMB adolescent girls are more than that of the HESP students.

WH - 100
1995 - P11
Health Library and Information
CPHE - SCCHRA

SECTION C: ASSOCIATION OF KNOWLEDGE AND SELECTED BASELINE VARIABLES.

TABLE3: Association of knowledge and selected baseline variables of adolescent girls.

n=300

SL.No	Baseline Variable	Moderately Adequate		Inadequate		Chi Square
		F	%	F	%	
1	**Age©**					
	15-16	17	44.7	128	48.9	0.794
	17-19	21	55.3	134	51.1	(p- 0.635) NS
2	**Year of Education**					
	1st Year	16	42.1	134	51.1	1.085
	2nd Year	22	57.9	128	48.9	(p-298) NS
3	**Stream of Education**					
	Arts	15	39.5	135	51.5	1.928
	Scince	23	60.5	127	48.5	(p-0.165) NS
4	**Age at Menarche**					
	9-11	3	7.9	11	4.2	1.019 (p-0.31)
	12-14	35	92.1	251	95.8	NS
5	**Prior Information**					
	Not Received	3	7.9	138	52.7	26.712 p<0.001**
	Received	35	92.1	124	47.3	
6	**Source of Information**					
	Media	0	0	3	2.4	6.576
	Personal	17	48.6	85	68.5	P=0.037**
	Both	18	51.4	36	29	

©-Clubbed for statistical purposes** Highly significant at P<=0.001,NS-Not Significant.The above table shows that there is no significant association between knowledge score and the age,year of education,stream of education,age at menarche But there is a significant association between the baseline variables such as previous information about PMS and source of information about PMS.

DISCUSSION

6. Discussion

This chapter presents the major findings of the study and discuss them in relation to the similar studies conducted by other researchers. The main aim of the study was to assess the knowledge on PMS and its management among adolescent girls of selected colleges at Bangalore, urban. A structured questionnaire was used to elicit the baseline data and the knowledge of the adolescent girls regarding PMS and its management.

The study results are described under the following heading:

- Baseline variables of pre-university adolescent girls
- Findings related to knowledge of adolescent girls
- Findings related to association between knowledge score and selected baseline variables

Baseline variables of pre university adolescent girls

Pre university adolescent girls selected for this study were in the age group between 15-19 years. The mean age was 17 years. Findings revealed that most of them were in the age group of 17 years.(47%).A study conducted in Bangalore in the year 2005 among 60 adolescent girls to assess the knowledge regarding management of PMS showed 33.3% were in the age group of 13 years. 30% were in the age group of 15 years, 23.4% were in the age group of 14 years & 13.3% were in the age group of 16 years.[57] A study done in Raichur to assess the knowledge of PMS among 200 women of reproductive age reveals that majority of respondents 80 (40%) were the age group of 26-35 years followed by 15-25 years 72(36%) and 36-45 years

48(24%).[58] Another study conducted in korea among 100 women to find the effects of an educational programme that will help to alleviate womens signs and discomfort associated with PMS,the age of the respondents were between 15-40 years.[28]

In the present study regarding the year of education, 150 first year adolescent girls and 150 second year adolescent girls were selected. A study conducted in Raichur in the year 2004 to assess the knowledge of PMS among 200 women of reproductive age group shows that 80 respondents (40%) are graduates. 59 (29.5%) are with 10^{th} – 12^{th} Standard education. 43 (21.5%) are Post Graduates. 12(6%) are less than 10^{th} standard education and 6 (3%) respondents knows only to read & write.[58]

Stream of education selected for the present study is science (PCMB) And arts(HESP).The samples selected were 150 from each of the categories.A study conducted in Raichur to assess the knowledge of PMS among 200 women of reproductive age group revealed that there were 4 categories of educational levels- Post graduates, graduate, High school, Illiterate.[58]

Regarding age at Menarche, in the present study 286 (95.3%) of the adolescents were between 12-14 years and 14(4.7%) girls were between 9-11 years.A longitudinal birth cohort study in 1986 conducted in the maternity wards /hospitals of southern brazil regarding PMS according to age at menarche reveals 12.4 years was similar to that found in another Brazilian study in Barrinha at 12 years and 6 months. and one in Malaysia 12.3 years. But slightly lower than that of a study conducted in USA.[41]

Regarding Prior information about PMS, 159(53%) of them received prior information about premenstrual syndrome and 141 (47%) did not have prior information about PMS. An experimental study done among 81 Mexican women about PMS in reports of women and their symptoms. The results shows that there were no significant differences in the control group. However, women in experimental group reported more severe premenstrual symptoms after watching the videotape.[22]

With regard to the source of information,3(1.9%) received information from media,102(64.2%) from personal and 54(33.9%) received from both. A Study was done in Bilaspur among school going girls regarding reproductive health and related problems. Majority of girls (80%) was aware about all the aspects of reproductive health and related problems. 80.4% has received sex education. Media being the major source followed by friends.[3] A cross sectional study conducted in Ethiopia among school girls aged 14-19 years. The leading source of information to the adolescent girls were mothers (39.7%) followed by friends (26.6%) and teachers 21.8%.[1]

Findings related to knowledge of adolescent girls regarding PMS.

Of the 300 pre university adolescent girls who were assessed regarding knowledge of PMS and its management only 12.7% had moderate knowledge, 87.3% had inadequate knowledge and none possessed adequate knowledge. Their knowledge in specific content area regarding PMS and management was inadequate which accounted for 41.43%.Totally with the knowledge score being 12.43(2.62)(Mean/SD). Findings of the study revealed that girls knowledge about causes and signs and symptoms was further lower which was 34.75% and 34.90% respectively. A Study

was done in Raichur among 200 women of reproductive age group to, assess the knowledge of PMS . The Result shows that respondents in the age group of 15-25 yrs got highest mean knowledge score of 22.7 with a SD of 0.68 followed by 36-45 yrs age group who got a mean knowledge score of 18.54 with a SD of 0.60 and 26-35 yrs age group mean is 16 .53 with SD of 0.63 . This implies that young girls have more knowledge about PMS than middle age women. The study also revealed that high mean knowledge score is gained by the respondents who are graduates (mean=17.59 SD-0.56),followed by post graduates(Mean =16.91,SD-0.83).10^{th}-12^{th} standard (mean = 15.21,SD=0.63) and the respondents whose educational status is less that 12^{th} std and who knows to read and write got almost equal mean knowledge scores (Mean= 1.75.SD=0.75,Mean 13.33 SD=0.68 respectively).This implies that women with education of degree and above have more knowledge about PMS than women with education of below 12^{th} standard.[58]

A study conducted in Korean university women regarding knowledge and attitude of PMS. Results shows that they prefer self diagnosis and self prescription. It indicates that the adequate evaluation and treatment for PMS are not carried out because of the lack of knowledge about them.[59] An Exploratory study was conducted in Brazilian women aged 18-40years with regard to PMS. The level of knowledge about the existence of PMS and its symptoms was high compared with the findings of other studies carried out in Latin America.[60]

Findings related to association between knowledge and selected baseline variables.

The present study revealed that there is a significant association between knowledge and prior information ($\chi 2=26.712$, $p<0.001$) about PMS and Source of information ($\chi 2=6.576$,$p=0.037$). There is no association between age, year of education, stream of education and age at menarche. Contradicting the present study, The study done in Raichur to assess the knowledge and prevalence of PMS among women of reproductive age group, The Result shows that there is a significant association between knowledge of women with regard to premenstrual syndrome and their age($\chi 2=15.74$) and education($\chi 2=23.97$). [59]

From the findings, it is evident that adolescent girls in general lacks knowledge on premenstrual syndrome and its management. Therefore the information booklet prepared by the investigator can be utilized in increasing the knowledge of students on various aspects of premenstrual syndrome.

CONCLUSION

7. Conclusion

"Health is wealth" goes the saying. Health is an essential factor for a happy & contented life. Encouraging people to adopt healthy life styles and appropriate coping strategies are the key aim in health promotion.

PMS is a common disorder of young and middle aged women. A small number of these women will have symptoms severe enough that they can disrupt their daily lives.

The only way to tackle this problem is by educating the women about meaning, signs and symptoms and management of PMS. The present study aims to achieve this by preparing an information booklet based on the knowledge score of adolescent girls on various content areas. The findings of the study revealed that adolescent girls have inadequate knowledge regarding various aspects of PMS and management.

Implications of the study:

The findings of the study have several implications in the field of nursing practice, nursing administration, nursing education and nursing research.

Nursing practice

The study findings revealed that there was inadequate knowledge of PMS and management. The community health nurse has a vital responsibility in creating health consciousness among the female population, especially the adolescent girls at college

level as they are future mothers. Any education given to the adolescent is worthwhile as they are in constant touch with peer group and can spread the message faster and in an effective manner. There for a community health nurse must understand the importance of the upcoming problems and can organize an awareness program regarding the various aspects of premenstrual syndrome.

Nursing education

Nursing education should lay emphasis on preparing prospective nurses to impart health information and assist the community in developing their self care potentials. This can be done by incorporating health information dissemination and client counselling using advanced educational technology. Health promotion and primary prevention should be integrated as the main component in all aspect of community health nursing practice by means of focusing on nursing education curriculum.

Nursing administration

The nursing administration should support the nursing staff for arranging regular health education in hospitals as well as in the community. Periodic survey should be done to evaluate the programmes. Adequate health education materials should be provided and innovative method of teaching should be encouraged. Nurse administration can use the findings of the current study, which shows the inadequate health information provided by the health personnel to adolescent girls regarding PMS and its management, and they can organize health programmes for adolescent girls.

Nursing research

The present study shows that adolescent girls did not receive adequate education regarding PMS and its management from health professional. Nurses form an important cadre of health team, should take the initiative to conduct research programme. Therefore various studies should be conducted from time to time to find out the knowledge of adolescent girls regarding various aspects of PMS.

Limitations

The study was limited to pre-university adolescent girls who have taken science (PCMB) and arts (HESP) as their main subjects.

The study was limited to pre- university adolescent girls in 3 colleges of Bangalore urban.

The study was limited to the knowledge component – only.

Recommendations

Comparative studies could be done in private and Government Colleges

Comparative study could be done between urban and rural colleges.

Comparative study can be conducted between married and unmarried women

Experimental study could be done to find out the effectiveness of information booklet, prepared by the investigator.

Knowledge, attitude and practice study could be done.

SUMMARY

8. Summary

This chapter gives a brief description of the present study including conclusion drawn from its findings and its implication, limitations of the study and recommendations for future.

The present study was descriptive in nature and was undertaken to assess the knowledge on PMS and its management among adolescent girls of selected colleges at Bangalore Urban.

The Objectives of the study were:

1. To assess the knowledge of adolescent girls regarding Premenstrual Syndrome and its management.
2. To find the association between knowledge and selected baseline variables.
3. To develop an information booklet for adolescent girls regarding Premenstrual Syndrome and its management.

Assumptions of the study:

1. Adolescent girls will have some knowledge about Premenstrual Syndrome.
2. Premenstrual Syndromes are common in adolescent girls.

Hypothesis

There will be a significant relationship between knowledge and selected baseline variables (age, year of education, and stream of education, age at menarche, prior information about PMS and source of information about PMS) at 0.05 level of significance.

The conceptual framework adopted for the study based on Rosenstoch's, Becker's and Maimans' health belief model. This highlights 3 factors: 1. Individual perception, 2. Modifying factors, and 3. likelihood of actions.

Review of literature and expert opinion helped the researcher to develop a conceptual model, tool and methodology for the study. Descriptive survey approach was utilized for the study.

The content validity of the tool was established by nine nursing experts and four medical experts. Reliability of the questionnaire was established by using split half method and reliability was found by using Pearson's product moment formula. The 'r' value obtained was 1 positive perfect correlation. Thus the tool was found to be reliable. The pilot study was conducted at St. Francis PU College Sarjapur road, Bangalore between 1st to 8th June. Thirty students were selected from PCMB, HESP and HEBA group using stratified random sampling technique. Lottery method was used to select these five students from each stratum. The study was found to be feasible. The results of the pilot study was presented and necessary corrections were made as suggested by the guides and research committee.

The final study was conducted at three selected Pre-University Colleges at Bangalore. The adolescent girls were stratified based on the stream of education (PCMB, HESP) and year of education (1st year and 2nd year). Each of these colleges. girls were selected using stratified random sampling technique. The sample comprised of 25 arts and 25 science (25×2=50) and 1st year and 2nd year (50×2=100) and three colleges (100×3=300). So, 300 samples were selected. The data analysis was done by descriptive and inferential statistics.

Findings of the study:

The study revealed that the Pre-University students in general had inadequate knowledge regarding various aspects of PMS and its management. Out of the 300 pre-University students who were assessed on the knowledge of PMS and its management, only 12.7% had mo`derate knowledge, 87.3% had inadequate knowledge. There was an association between the knowledge level and the previous information about PMS and source of information about PMS. There was no association between knowledge with other selected baseline variables (age, stream of education, year of education and age at menarche).

Hence the information booklet prepared by the investigator could be utilized in giving health education and improving the knowledge of adolescent girls on various aspects of PMS and its management.

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ANNEXURES

Annexure 1

Letter seeking permission to conduct the pilot study

From

Silvy Thomas

II[nd] year MSc Nursing

St. John's College of Nursing

Bangalore – 560034

To

The Principal

St. Fransis Comp PU College

PB.No- 3417

Koramangala, Bangalore- 560034

Forwarded through

Mrs. Madonna Britto

Principal

College of Nursing

St. John's National Academy of Health Sciences

Bangalore - 560034

Respected Father,

Sub: Letter seeking permission to conduct the Pilot study.

As part of my partial fulfillment of M.Sc Nursing degree under Rajiv Gandhi University of Health Sciences, Bangalore, I have selected the following topic for my thesis: "A study to assess the knowledge of Pre Menstrual Syndrome and its management among adolescent girls at a selected college, Bangalore with a view to develop an information booklet".

The study period would be from 1/6/2010 to 16/6/2010. The study would involve first and second year Pre-University students (PCMB, HEBA, HESP). Each of the three divisions five samples will be selected per each year (5×3=15), (15×2=30)

Hence I kindly request you to grant me permission to conduct the study at your esteemed institution.

Thanking you,

Yours faithfully

Date

Silvy Thomas

PRINCIPAL
COLLEGE CODE
ST. FRANCIS COMPOSITE PU COLLEGE
KORAMANGALA, BANGALORE

Annexure 2

Letter seeking permission to conduct the study

From

Silvy Thomas

II[nd] year MSc Nursing

St. John`s College of Nursing

Bangalore – 560034

To

The Principal

St. Anne`s Girls PU College

2 Miller Road, Vasant Nagar,

Bangalore- 560052

Forwarded through

Mrs. Madonna Britto

Principal

College of Nursing

St. John`s National Academy of Health Sciences

Bangalore - 560034

Respected Madam,

Sub: Letter seeking permission to conduct the study.

As part of my partial fulfillment of M.Sc Nursing degree under Rajiv Gandhi University of Health Sciences, Bangalore. I have selected the following topic for my thesis: "A study to assess the knowledge of Pre Menstrual Syndrome and its management among adolescent girls at selected colleges urban, Bangalore with a view to develop an information booklet".

The study period would be from 28/6/2010 to24/7/2010. The study would involve first and second year Pre-University students (PCMB, HESP). Each of the two divisions 25 samples will be selected per each year (25×2=50), (50-×2=100)

Hence I kindly request you to grant me permission to conduct the study at your esteemed institution.

Thanking you,

Yours faithfully,

Date: 15/7/2010

Silvy Thomas

Principal
St. Anne's Pre-University College
for Girls
No. 2, Miller Road, Bangalore-560052

Annexure 3

Letter seeking permission to conduct the study

From

Silvy Thomas

II[nd] year MSc Nursing

St. John's College of Nursing

Bangalore – 560024

To

The Principal

Bishopcotton Women PU College

193[rd] CRS CSI Compound

Bangalore- 560027

Forwarded through

Mrs. Madonna Britto

Principal

College of Nursing

St. John's National Academy of Health Sciences

Bangalore – 560034

Respected madam,

Sub: Letter seeking permission to conduct the study.

As part of my partial fulfillment of M.Sc Nursing degree under Rajiv Gandhi University of Health Sciences, Bangalore, I have selected the following topic for my thesis: "A study to assess the knowledge of Pre Menstrual Syndrome and its management among adolescent girls at selected colleges urban, Bangalore with a view to develop an intermarim booklet".

The study period would be from 28/6/2010 to24/7/2010. The study would involve first and second year Pre-University students (PCMB, HESP). Each of the two divisions 25 samples will be selected per each year (25×2=50). (50×2=100)

Hence I kindly request you to grant me permission to conduct the study at your esteemed institution

Thanking you.

Yours faithfully,

Date:28/6/2010

Silvy Thomas

Annexure 4

Letter seeking permission to conduct the study

From

Silvy Thomas

II[nd] year MSc Nursing

St. John's College of Nursing

Bangalore – 560034

To

The Principal

Jyothi Nivas PU College

Hosur Road, Koramangala

Bangalore- 560095

Forwarded through

Mrs. Madonna Britto

Principal

College of Nursing

St. John's National Academy of Health Sciences

Bangalore - 560034

Principal,
St. John's College of Nursing,
St. John's National Academy of Health Sci...
BANGALORE – 560 034

Respected. Sister,

Sub: Letter seeking permission to conduct the study.

As part of my partial fulfillment of M.Sc Nursing degree under Rajiv Gandhi University of Health Sciences, Bangalore, I have selected the following topic for my thesis: "A study to assess the knowledge of Pre Menstrual Syndrome and its management among adolescent girls at selected colleges urban, Bangalore with a view to develop an information booklet".

The study period would be from 28/6/2010 to24/7/2010. The study would involve first and second year Pre-University students (PCMB, HESP). Each of the two divisions 25 samples will be selected per each year (25×2=50), (50×2=100)

Hence I kindly request you to grant me permission to conduct the study at your esteemed institution.

Thanking you,

Yours faithfully,

Silvy Thomas

Date.25/6/2010

13/7/'10
PRINCIPAL
Jyothi Nivas Pre-University College
BANGALORE – 560 095.

Annexure- 5

Letter seeking expert opinion on content validity of tool

From,

Silvy Thomas

1st Year M.Sc Nursing

St. John's College of Nursing

Bangalore – 560034

To,

_____

_____

_____

Forwarded through

The Principal

St. John's College of Nursing

Bangalore - 560034

Respected Madam/Sir,

Subject: - Expert opinion on Content validity of Tool.

I, Silvy Thomas, doing my 1st year MSC (Community Health) Nursing at St. John's College of Nursing, request your expert opinion on the content validity of the tool. The topic selected for dissertation is "A study to assess the knowledge of pre menstrual syndrome and its management among adolescent girls at a selected urban college, Bangalore with a view to develop an information booklet" as a partial fulfilment for Master of Science in nursing degree at Rajiv Gandhi University of Health Sciences, Bangalore.

The objectives of the study are as follows:

1) To assess the knowledge regarding PMS and its management among adolescent girls.

2) To find out the association between knowledge with selected demographic variable.

3) To develop an information booklet for adolescent girls regarding PMS and its management.

I kindly request you to give your valuable suggestions regarding the appropriateness of the tool. Please write your expert comments on the evaluation criteria check list enclosed.

I also request you to kindly sign the certificate and I would be highly obliged and grateful to hear from you.

Thanking you in anticipation.

Yours faithfully,

Date :
Place :

Silvy Thomas
M.Sc Nursing student.

Enclosures:

1) Tool

Section – I Proforma to elicit baseline data.

Section- II Questionnaire to assess knowledge.

Blue print for knowledge questionnaire

Answer key.

2) Evaluation Criteria Checklist.

3) Certificate of validation.

Annexure-6

Validation Criteria checklist

Dear Madam/Sir,

Kindly go through the content and place a tick mark (√) against the questionnaire in the following columns ranging from relevant to not relevant, when found to need modification. Kindly give your opinion in the remarks

Section I

Baseline Data

SL No	Items	Relevant	Needs Modification	Not Relevant	Remarks
1					
2					
3					
4					
5					
6					
7					

Section II

A structured questionnaire for assessing the knowledge of premenstrual syndrome and its management among adolescent girls at a selected urban college, Bangalore with a view to develop an information booklet.

SL No	Items	Relevant	Needs Modification	Not relevant	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Any other comments

Signature of the validator

Name:

Designation:

Annexure-7

Certificate of validation

This is to certify that the tool constructed by Silvy Thomas, 1st Year M.Sc Nursing student of St. John's College of Nursing, Bangalore, to be used in her study titled" A study to assess the knowledge of premenstrual syndrome and its management among adolescent girls at a selected urban college, Bangalore with a view to develop an information booklet" has been found valid by me.

Signature:

Name:

Designation:

Date:

Annexure- 8

A structured questionnaire to assess the knowledge of premenstrual syndrome and its management among adolescent girls at a selected urban college.

Instructions

Dear Participants,

Please fill in the personal information requested in the provided space below. The data will be treated as confidential and used for research purpose only.

Section 1

Baseline Data

1. Sample Number _____
2. Age in Years _____
3. Year of Education _____
4. Stream of Education _____
5. At what age did you attain menarche _____
6. Do you have prior information regarding Premenstrual Syndrome? Yes [ ] No [ ]
7. If yes, where did you get the information from?

Media

Television [ ]

Internet [ ]

Newspaper [ ]

Personal

Mother [ ]

Relatives [ ]

Friends [ ]

Teachers [ ]

Section 2

Knowledge questionnaire on Premenstrual Syndrome

Instructions

Read each question carefully and place a (√) mark in the appropriate place provided.

All questions should be answered. Each correct answer carries one mark and wrong answer carries zero mark.

1. What is the meaning of Premenstrual Syndrome

   A) Cyclic bleeding from the uterus [ ]

   B) Release of mature ovum from the ovary [ ]

   C) Stoppage of menstruation abruptly [ ]

   D) Physical, emotional changes related to menstruation [ ]

2. What is the duration of normal menstrual bleeding?

   A) Less than three days [ ]

   B) 3 to 5 days [ ]

   C) 6 to 8 days [ ]

   D) 9 days and above [ ]

3. Which age group is mostly affected by Premenstrual Syndrome?

A) Middle age women [ ]

B) All menstruating women [ ]

C) Old age women [ ]

D) Adolescent girls [ ]

4. How is Premenstrual Syndrome identified?

A) Blood test [ ]

B) Urine Test [ ]

C) Symptoms [ ]

D) Abdominal scan [ ]

5. When will Premenstrual Syndrome usually appear?

A) One week before menstruation [ ]

B) Two weeks before menstruation [ ]

C) During menstruation [ ]

D) One day before menstruation [ ]

6. How often does a woman get her menstruation normally?

A) Once in two months [ ]

B) Once in one and a half month [ ]

C) Once in a month [ ]

D) Once in fifteen days [ ]

7. What is the probable cause of Premenstrual Syndrome?

A) Stress and strain [ ]

B) Hormonal changes [ ]

C) Familial [ ]

D) All of the above [ ]

8. Which hormonal deficiency causes PMS?

A) Estrogen [ ]

B) Growth hormone [ ]

C) Pituitary hormone [ ]

D) None of the above [ ]

9. What type of food will increase Premenstrual Syndrome?

A) High protein diet [ ]

B) Low carbohydrate diet [ ]

C) Caffeine and chocolate [ ]

D) Low fat diet [ ]

10. Which one of the following is a contributing factor for Premenstrual Syndrome?

A) Extreme thin body [ ]

B) Dietary Factors [ ]

C) Short and obese body [ ]

D) None of the above [ ]

11. Which one of the following is a symptom of Premenstrual Syndrome?

A) Retention of fluid and abdominal pain [ ]

B) Heavy vaginal bleeding and cramping [ ]

C) Hot flushes and joint pain [ ]

D) Irregular periods and decreased flow [ ]

12. What are the behavioural effects of Premenstrual Syndrome?

A) Depression [ ]

B) Irritability [ ]

C) Tension [ ]

D) All of the above [ ]

13. Which are the classical symptoms of Premenstrual Syndrome?

A) Nausea, vomiting [ ]

B) Leg pain, abdominal pain [ ]

C) Mood swings, breast tenderness [ ]

D) Backache, leg pain [ ]

14. What extreme are women disturbed during Premenstrual Syndrome?

A) Irritability [ ]

B) Insomnia [ ]

C) Social withdrawal [ ]

D) Depression [ ]

15. What are the effects of Premenstrual syndrome in relationship with others?

A) Good relationship [ ]

B) Disrupted relationship [ ]

C) Builds up relationship [ ]

D) No change in relationship [ ]

16. What are the effects of Premenstrual Syndrome on cardio vascular system?

A) Increased blood pressure, increased pulse rate [ ]

B) Increased pulse rate, decreased blood pressure [ ]

C) Decreased blood pressure, decreased pulse rate [ ]

D) None of the above [ ]

17. What are the common emotional symptoms of Premenstrual Syndrome?

A) Crying [ ]

B) Tension [ ]

C) Anger [ ]

D) All of the above [ ]

18. Which is the most common gastro intestinal symptom related to Premenstrual syndrome?

A) Tiredness [ ]

B) Loss of appetite [ ]

C) Leg pain [ ]

D) Constipation [ ]

19. Which one of the following symptom is NOT related to Premenstrual Syndrome?

A) Abdominal pain, cramps [ ]

B) Chest pain, breathlessness [ ]

C) Nausea, vomiting [ ]

D) Headache, fatigue [ ]

20. When does Premenstrual Syndrome disappear?

A) One day after menstruation [ ]

B) Onset or after one or two days of menstruation [ ]

C) After stoppage of menstrual bleeding [ ]

D) Two weeks after menstruation [ ]

21. Which nutritional change is recommended in management of the symptoms of Premenstrual Syndrome?

A) Decrease caffeine intake [ ]

B) Increase sugar intake [ ]

C) Decrease protein intake [ ]

D) Increase total calorie intake [ ]

22. Whose help should be taken if premenstrual symptoms become severe?

A) Friends [ ]

B) Neighbours [ ]

C) Health professionals [ ]

D) Elder women [ ]

23. What are the measures to overcome backache before menstruation?

A) Lying on firm bed [ ]

B) Sleeping on soft bed [ ]

C) Sleeping for long time [ ]

D) Rigorous exercise [ ]

24. Which of the following menstrual related problem requires priority medical help?

A) Leg pain [ ]

B) Severe Premenstrual symptoms [ ]

C) Occasionally irregular period [ ]

D) Scanty flow [ ]

25. How can women get relief from painful breast due to Premenstrual Syndrome?

A) Rest [ ]

B) Hot bath [ ]

C) Low carbohydrate diet [ ]

D) Supportive bra [ ]

26. What is the best measure to overcome tension from Pre menstrual Syndrome?

A) Relaxation technique [ ]

B) Rest [ ]

C) Sleeping for long time [ ]

D) Reduce food intake [ ]

27. Which one of the following vitamins are used for treating Premenstrual Syndrome?

A) Vitamin A and B [ ]

B) Vitamin A and E [ ]

C) Vitamin A and C [ ]

D) Vitamin A and D [ ]

28. Which mineral is used for treating Premenstrual Syndrome?

A) Calcium [ ]

B) Phosphorous [ ]

C) Pottasium [ ]

D) Zinc [ ]

29. Which of the following drug is used for treating Premenstrual Syndrome?

A) Brufen [ ]

B) Gelusil [ ]

C) Rantac [ ]

D) None of the above [ ]

30. Which of the following diet will help prevent constipation?

A) Spicy and oily foods [ ]

B) Tea and coffee [ ]

C) Plenty of vegetable and fruits [ ]

D) Salt free diet and chocolates [ ]

Blue print for knowledge questionnaire

Sl .No	Content	Knowledge		Comprehension		Application		Total	
		Q No	Total No	Q No	Total No	Q No	Total No	Total No	%
1	Meaning	1,3,5,6	4	2,4	2			6	20
2	Causes	10	1	7,8	2	9	1	4	13.33
3	Effects/S&S	11,12,14,15,17,18,20	7	13,16,19	3			10	33.33
4	Management	22,27,28	3	24,29	2	21,23,25,26,30	5	10	33.33
	TOTAL		**15**		**9**		**6**	**30**	**100%**

Total score = 30
Adequate knowledge = ≥75%
Moderately adequate = 51% - 74%
Inadequate knowledge = ≤50%

Annexure- 10

Answer Key

Question No	Answer	Question No	Answer
1	D	16	A
2	B	17	D
3	B	18	D
4	C	19	B
5	A	20	B
6	C	21	A
7	D	22	C
8	A	23	A
9	C	24	B
10	B	25	D
11	A	26	A
12	D	27	B
13	C	28	A
14	D	29	A
15	B	30	C

Annexure -11

List of experts who validated the tool

1. Mrs. Rajeswhari Shiva,
   Professor
   Dept. Of Community Health Nursing
   CMC Vellore - 04

2. Dr. Twinkle, Associate Professor
   Dept. Of Community Medicine
   St. John's Medical College Hospital
   Bangalore – 34

3. Mrs. K.C.Leena, Associate Professor
   Dept. of Community Health Nursing
   Father Muller's College of Nursing

4. Sr. Jacintha D'souza
   Principal and Professor
   Dept. of Community Health Nursing
   Father Muller's College of Nursing
   Mangalore – 02

5. Sr. Cicil, Professor
   Dept. of Community Health Nursing
   Athena College of Nursing
   Pulina Road
   Mangalore

6. Mrs. Suja Karkode
   Professor and H.O.D
   Dept.of Community Health Nursing
   Mahe, Manipal
7. Mr. Prakash H.B
   Professor and H.O.D
   Dept. of Community Health Nursing
   Govt. College of Nursing

8. Dr. Farah, Associate Professor
   Dept. of Community Medicine
   St. John's Medical College Hospital
   Bangalore – 34

9. Sr. Celcy Mary
   Vice-Principal
   Professor and H.O.D
   Dept. of OBG
   St. John;s College of Nursing
   Bangalore – 34

10. Mrs. Mary Joseph
    Associate Professor
    Govt. College of Nursing
    Medical College, Calicut
    Kerala

11. Dr. Arun Maskar, Professor
    Dept of OBG
    St. John's Medical College Hospital
    Bangalore – 34

12. Dr. C.N.Sheela, Professor

    Dept of OBG

    St. John's Medical College Hospital

    Bangalore – 34

13. Sr. Edith UMI

    Principal

    Holy Family Hospital and School of Nursing

    Hill Road – Mumbai

Annexure-12

Certificate of Editing

CERTIFICATE OF EDITING

This is to certify that the research work done by Mrs. Silvy Thomas, 2nd year M.Sc Nursing student of St.John's College of Nursing Bangalore. **"A study to assess the knowledge of premenstrual syndrome and its management among adolescent girls at selected colleges, in Bangalore urban with a view to develop an information booklet"** has been edited by me.

She has to make no/ few/ many modifications before proceeding in her study.

Signature

Name of editor: Mrs Maya Rajan

Designation: Retired Teacher of Bethany High School

Date: 24.11.2010

Annexure - 12

INFORMATION BOOKLET ON PREMENSTRUAL SYNDROME AND ITS MANAGEMENT

A study to assess the knowledge of premenstrual syndrome and its management among adolescent girls at selected colleges in Bangalore urban with a view to develop an information booklet.

by

Silvy Thomas

Dissertation submitted to
Rajiv Gandhi university of Health Sciences
Bangalore, Karnataka.
In partial fulfillment of the degree of
Master of Science in Nursing
in
Community Health Nursing

Under the guidance of
Prof. Mercy P. J.
Head of the Department of Community health Nursing
St. John's College of Nursing
St. John's National Academy of Health Sciences
Bangalore-34
2011